

BURN VICTIMS' APPRAISAL AND COPING PROCESSES:  
IMPLICATIONS FOR PATIENT EDUCATION

By

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This dissertation is dedicated to Fred, Rachael, Bogart, and Copper for  
all of their love and support

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Approximately two million individuals sustain burn injuries annually. Although the burn victim's adaptation to conditions of acute, life-threatening stress have been well investigated, systematic studies of patients' long-term psychosocial adjustment are rare. A specific research priority articulated at the National Institute of Health Conferences on Burn Injury was for studies of coping and the adjustment process. The purpose of this study was to explore the appraisal and coping processes used by burn victims.

Thirty-three subjects were selected from a list of 312 patients who were treated at a southeastern regional burn unit and met the criteria for inclusion into the study. The major data collection tools were ethnographic interviews and medical record analysis. Spradley's model for analyzing ethnographic data was employed.

At the start of the study, an emphasis was placed on understanding the subjects' appraisals or definitions of their post-burn lives. The appraisal process was explored by asking subjects to describe their

typical activities. They were also asked to describe how they felt about their daily routines and the problems they encountered. All of the subjects experienced similar problems or role strains as a result of the injuries. In response to these role strains, subjects used a variety of coping behaviors.

Subjects described four distinct kinds of role strains. They were physical alterations, alterations in social roles and activities, financial changes, and emotional changes. Lower-middle-class subjects faced a greater number and intensity of role strains than middle-class subjects. Lower-middle-class subjects had larger burn injuries than the middle-class subjects. The varying responses between the two groups may reflect differences in disability as well as social class differences.

Burn victims used two distinct forms of coping: emotion-focused coping and problem-focused coping. The former strategy is directed toward the regulation of emotions of distress whereas the latter is directed toward the management of the problem that is causing the distress. Burn victims from middle-class backgrounds used more problem-focused strategies than the less affluent subjects. Lower-middle-class subjects used more emotion-focused coping strategies. Withdrawal, avoidance, and demeaning other people were common. The coping behaviors represented the burn victim's attempts to maintain feelings of self-esteem in the face of numerous hardships and role strains.

## CHAPTER I INTRODUCTION

### Statement of the Problem

Approximately two million individuals sustain thermal injuries annually. One hundred thousand of these injuries are severe enough to require hospitalization (Wachtel, 1985). As a result of the growth of comprehensive burn care facilities, mortality of burn victims has declined greatly and quality of life issues have become crucial. Once survival is assured, the patient and his/her family must adjust to a traumatic change in life style.

Rehabilitation is the process of learning to live with a disability. Learning occurs in a wide range of settings. Hospitals and outpatient clinics are often the site of patient education and rehabilitation programs. Educational psychology involves the study of behavioral phenomena in a variety of educational settings, not just schools. Therefore this study focused on variables that affect teaching and learning in the outpatient clinic setting.

Approximately 20 to 30% of the survivors of moderate to critical burns will require at least one and sometimes many readmissions to the hospital for surgical corrections of functional and cosmetic deformities (National Burn Institute Exchange, personal communication, April 4, 1986). Although many of these procedures will be done in the first several years after a burn, some patients continue to undergo surgical reconstruction for as long as 20 years later. Life during

rehabilitation is characterized by change and disruption. Physical limitations may affect employment and recreational opportunities. Amputations and/or scar tissue formation may impair mobility. Permanent disfigurement and pain are other consequences of burn injuries.

Although the burn victim's adaptation to conditions of acute life-threatening stress have been well investigated, systematic studies of patients' long-term psychosocial adjustment are rare. Only eight studies have been conducted since 1943 that addressed the long-term adjustment problems of the adult burn victim. With one exception, the researchers reached the same conclusion: Psychological adaptation tends to occur about a year after the injury. Within that year burn victims experience post-traumatic neurosis, accompanied by feelings of helplessness, hopelessness, and depression. These problems are grave but they resolve spontaneously. Few victims experience long-term sequelae (Adler, 1943; Andreasen & Norris, 1972; Blades, Mellis, & Munster, 1982; Chang & Herzog, 1976; Davidson, Bowden, & Feller, 1981; Feller & Bowden, 1985). The conclusions drawn from these studies are exactly the opposite of what one might expect considering the severity of burn injuries.

One researcher has questioned the results of the spontaneous adjustment studies. Bernstein (1976, 1982, 1983) conducted extensive interviews with burn victims who were seen on an outpatient basis following their injuries. His findings are in striking contrast to those reports which suggest that burn victims adjust to their injuries within a year and without long-term sequelae. Bernstein found that individuals experience depression and extreme feelings of hopelessness,

long after their initial injuries. The patients had few resources to draw on as they attempted to adapt to post-injury life.

The research on physically disabling injuries has shown that the relationship between psychosocial adaptation and chronic disorders is complex. According to Roessler and Bolton (1978),

The results of numerous studies (see Baker et al., 1953; McDaniel, 1976; Pringle, 1964; Shontz, 1971; and Wright, 1960) have supported three often-repeated and independently derived conclusions: (a) specific disabilities are not associated with identifiable personality types, e.g.; deaf persons are not characterized by a particular personality syndrome, nor are amputees, blind persons, arthritics, etc.; (b) there is no simple relationship between severity of disability and degree of psychological impairment, e.g.; quadriplegics are not necessarily less well adjusted than paraplegics and multiple amputees may evidence better adjustment than person with minor, yet visible, burn injuries; (c) there exists a wide range of individual reactions to disability, e.g.; two persons with very similar handicapping conditions often demonstrate entirely different types of responses to their situations. (p. 21)

These results have led researchers to investigate conditions that may create differing reactions to disability. The influence of personal and situational variables on adaptation to chronic illnesses has received increasing attention in the current literature. More specifically, interest has grown regarding the effect of an individual's perception or appraisal of a stressful event and the resultant coping processes (Lazarus & Folkman, 1984).

Coping has been defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141).

The appraisal process consists of what researchers have called primary and secondary appraisals. Primary appraisal is the individual's

judgment that a situation is irrelevant, positive, or stressful. If a situation is considered to be irrelevant, no further action is necessary. Positive appraisals are accompanied by a range of pleasurable emotions such as joy or love. With a positive appraisal, the individual has determined that the outcome will be favorable. Stress appraisals involve fear regarding potential or actual losses (Lazarus & Folkman, 1984).

Once an individual has determined that a situation is threatening, or stressful, action must be taken to manage the problem. Secondary appraisal is the process of evaluating what might and can be done. Decisions regarding available coping options are included in the evaluation phase (Lazarus & Folkman, 1984). None of the work that has been conducted on the long-term adjustment of the burn victim has explored the role of appraisal and coping as it relates to the recovery process.

#### The Purpose of the Study

The purpose of this study was to explore the appraisal and coping processes employed by burn victims using qualitative methods. Several researchers have found that individual coping responses play a role in differing reactions to chronic disabilities (Felton & Revenson, 1984; Felton, Revenson, & Hinrichsen, 1984; Folkman, Lazarus, Gruen, & Delongis, 1986). Coping responses are determined by the individual's perception or cognitive appraisal of the stressful situation. An analysis of appraisal and coping processes has not been conducted with burn victims.

Research into the long-term recovery process of burn victims is still in its infancy (Cooper, 1984). A specific research priority

articulated at the National Institute of Health (NIH) Conference on burn injury was for studies of coping and the adjustment process. Feller and Bowden (1985) have studied burn victims since 1959. They note that there is a dearth of research related to the social support, coping, employment, and recreational activities of burn victims. The proposed study is a response to research priorities established in the area of burn care and rehabilitation.

Lazarus and Folkman (1984) advocated studying the coping process in a variety of specific contexts. More significant contributions can be made to the literature on coping by moving away from general assessments of coping behavior to more indepth studies of specific situations. Appraisal and coping need to be assessed with respect to the demands created by a specific event. Since coping strategies for a given individual can vary widely across circumstances, it is useful to study coping within the confines of a particular context (Lazarus & Folkman, 1984). The study of appraisal and coping responses in burn victims can be useful in the area of burn care, as well as in the area of stress management and coping behavior.

#### Significance of the Study

Learning occurs in a variety of settings. The task of an educational psychologist is to address issues related to teaching and learning in a variety of settings including hospitals and clinics. Patients and their families need and want information about self-care, treatment regimens, and stress management after discharge from the hospital. Patient teaching is one of the responsibilities of a professional nurse (Kenner, Guzzetta, & Dorsey, 1985). Nurses can play an integral role in the psychosocial rehabilitation of the burn victim

through patient teaching. However, there is almost no information available to form the basis for teaching useful coping strategies to burn victims.

Rehabilitation is a dynamic process that starts the moment the person is injured and continues for a lifetime (Bowden, Jones, & Feller, 1979). Descriptions of the rehabilitation period for the severely burned have been almost totally limited to discussions of the initial hospitalization. Bowden, Jones, and Feller (1979) noted

We think that researching and documenting the process of adjustment to a severe burn in terms of person and environment must be a priority in the next few years if we are to design rehabilitation programs and services necessary to meet the needs of the population. (p. 30)

Researchers need to explore the role of coping process and adaptation to thermal injuries. Information from these studies can be used as the basis for patient teaching and rehabilitation programs.

As more and more people survive serious burn injuries, the understanding of how physical, social, and psychological factors influence the recovery process becomes increasingly critical. Considering that the rehabilitation period for the burn victim can last as long as one to two decades, the psychosocial and economic impact on the patient, his or her family, and society can be and often is profound. Improvements in the medical treatment of the burn patient have been dramatic; the health team's ability to meet the psychosocial rehabilitation needs of these patients has not been so impressive. A greater understanding of the personal and situational variables that facilitate and/or hinder recovery is needed. An analysis of the role of appraisal and coping in recovery from thermal injuries will enhance the

ability of health care professionals to assist burn victims and their families during the long recovery period.

#### Limitations of the Study

The following limitations must be considered in this study:

1. Since no research has been conducted exploring appraisal and coping among burn victims, this work represents an initial exploration. Therefore qualitative methods were employed. The interview questions that were posed need to be refined further as a result of the analyses conducted in this study.
2. Patients were selected from a list of patients treated at a regional burn center. However, many burn victims were transient and for some current addresses were not available. The sample may be biased towards those subjects with more stable home situations and more social dispositions. The patients who did agree to participate may not be representative of the total population of burn victims.

#### Research Questions

The following general research questions emerged from the review of literature on adaptation to burn injuries and the appraisal and coping process:

1. What are the burn victims' perceptions or appraisals regarding the effect of the injury on their life?
2. What coping strategies have the burn victims employed as a result of the injury?

Additional questions provided further structure for the study.

1. Is there a relationship between the demographic characteristics of the subjects (age, sex, marital, and socioeconomic status) and the cognitive appraisal of their injury?

2. Is there a relationship between the demographic characteristics of the subjects and the coping strategies they employed?

3. Is there a relationship between the extent of the burn and the cognitive appraisals made and the coping strategies employed?

4. Is there a relationship between the appraisal and coping process and resumption of preburn activities?

5. Is there a relationship between the caregiver's description of the burn victim's appraisal and coping process and the burn victim's self-assessment?

#### Scope of the Study

The purpose of this study was to explore the appraisal and coping processes employed by burn victims. Thirty-three subjects were selected from a list of 312 patients who were treated at a southeastern regional burn unit and met the criteria for inclusion into the study. In addition, the subject was asked to name one person who had been providing the greatest amount of support and assistance since the injury. This person was interviewed for the purpose of corroborating the information provided by the burn victim. Qualitative research methods were used in this study. The major data collection tools were ethnographic interviews and document analysis. Spradley's (1979) model for analyzing ethnographic data was employed.

## CHAPTER II REVIEW OF THE LITERATURE

### Overview

Limited information is available regarding the long-term psychosocial adjustment of the burn victim. However, a clear consensus exists regarding the burn victim's reactions to hospitalization and discharge from the burn unit. An overview of the literature related to the burn victim's hospital adjustment will be provided. This section will be followed by a presentation of studies describing the epidemiological profile of burn patients. The information contained in the epidemiological analyses is useful in critiquing the studies related to the burn victim's long-term adjustment. The profiles also suggest crucial variables that needed to be considered in the present study.

Following this discussion, studies related to the long-term adjustment of the burn victim will be analyzed. The research design, characteristics of the sample, theoretical framework, analysis of the data, and conclusions will be presented. Case studies of burn victims that have appeared in the literature will also be discussed.

The literature related to the psychosocial adaptation of the burn victim provides little information regarding appraisal and coping processes during the recovery phase. However, the literature on psychosocial stress and coping contains information that may be utilized in the study of burn victims. Lazarus and Folkman's model of appraisal and coping processes will be presented. This model was not

being tested in this study. However, it does provide a framework for studying how people define and cope with stressful situations.

### Reactions to Hospitalization

Numerous studies concerning the psychological aspects of the severely burned patient during hospitalization are available in the literature (Steiner & Clark, 1977; Tollisin, Still, & Tollisin, 1980; Wachtel, 1985). Although various authors use different labels, all describe similar stages of the individual's adaptive response to trauma.

During stage one, the acute phase of the injury, patients typically experience disorientation, discomfort, pain, and fear. This phase is complicated by a variety of physiologic stresses including acidosis, fluid shifts, changes in endocrine balance, and potential infection (Artz, Moncrief, & Pruitt, 1979). Defenses such as denial and projection are employed by some victims in an attempt to avoid confronting the reality of their grim situation. At this stage the patient's questions are focused on survival and the physiologic factors that make survival possible (Steiner & Clark, 1977).

During the second stage, survival is no longer an issue and anxieties and fears accompany a victim's projection about the future. Victims worry about their appearance, ability to work and function socially, and if they will be accepted by family members. At this time, the focus of physical treatment is toward increasing patient activity through intensive physical and occupational therapy. The patient may enter a therapeutic alliance with the staff, complicated by periods of anger and hostility (Tollisin et al., 1980).

Stage three begins prior to discharge from the hospital. The anxieties that patients experienced during stage two are reactivated. Patients are confronted with the full meaning of the limitations imposed by their injuries. As burn victims face the less protective environment of the outside world, they must learn to cope with curiosity and even hostility in those around them (Steiner & Clark, 1977).

Although there is consensus in the literature regarding the initial reactions to trauma, the burn victim's long-term psychosocial adjustment has not been well documented. This issue is of particular importance because modern burn care has resulted in dramatically improved survival statistics (Artz, Moncrief, & Pruitt, 1979). As more and more severely burned individuals survive, an understanding of the variables that may affect the recovery process is crucial. Some of the variables that must be considered in the analysis are related to the demographic characteristics of the burn victim.

#### Epidemiologic Profile of the Burn Victim

Several studies have been conducted in an attempt to identify those individuals at risk for sustaining a thermal injury (Crikelair, Symonds, Ollstein, & Kirsner, 1968; MacArthur & Moore, 1975; Noyes, Frye, Slymen, & Canter, 1979). From these studies a typical epidemiologic character of the burn-prone patient emerges. This patient is somewhat more likely to be a woman, with alcoholism or drug use in the background. In addition, approximately 50% of the victims studied had a pre-existing chronic physical or psychiatric disorder. The victims were limited in physical and intellectual resources (as judged by level of education) and also in social and financial means. At the opposite end of the spectrum is the otherwise healthy male who has been injured in an industrial

accident. Such injuries may be caused by the individual's own negligence but generally are not related to poor physical or mental health. This information has been ignored in the eight studies in which the researchers addressed the long-term adjustment of the burn victim. These studies will be presented in the next section.

#### Long-Term Adjustment of the Burn Victim

With the exception of the work by Bernstein (1976, 1982, 1983), the eight studies that have been conducted on the long-term adjustment of the burn victim do not provide any information related to appraisal and coping processes. However, the studies do represent the knowledge that was available related to the long-term psychosocial adjustment of the burn victim. The research design, characteristics of the sample, data analysis, conclusions and methodological problems will be presented for each study.

#### Adler (1943)

The earliest study reported in the literature involved an investigation by Adler (1943) of the survivors of the Cocoanut Grove fire. Until this incident, interest in the burn victim was essentially nonexistent. On November 28, 1942, a disastrous fire occurred in the Cocoanut Grove, a Boston night club. Four hundred and ninety-one people lost their lives in the fire. Of 131 total admissions to Boston City Hospital, 46 patients were available for inclusion in the study. Dr. Adler conducted an unspecified neuropsychiatric examination during the first week of hospital stay, three months post-discharge, and nine months after discharge from the hospital. He reported that 50% of the subjects had developed psychiatric complications primarily in the form

of "anxiety neurosis." These individuals complained of fears and anxiety which they were unable to control and which prevented them from resuming their normal activities. Adler further reported that there was no relationship between severity of burn or death of a relative in the fire and the subsequent development of psychiatric complications.

Adler made no other attempt to differentiate between those who developed "anxiety neurosis" following the injury and those who did not. Variables such as demographic and premorbid factors among others are important in assessing long-term adjustment. Failure to include these variables in the analysis limits the usefulness of Adler's study.

#### Korlof (1966)

It was not until 1966 that another report appeared in the literature investigating the incidence of long-term psychiatric complications in burn victims. Korlof (1966) received completed questionnaires from 265 persons burned in Sweden between 1951 and 1960. Only 17% of the sample reported that they were completely satisfied with the results of their medical treatment. Despite this finding, only 28% of the sample indicated that they experienced any emotional discomfort secondary to the burn trauma. Korlof provided no explanation for these findings, nor did he include demographic or premorbid data on the subjects.

#### Andreasen, Norris, and Hartford (1970)

Andreasen, Norris, and Hartford (1970) studied 9 women and 11 men who were at least one year post burn injury. Data collected consisted of interviews with the patient, a Minnesota Multiphasic Personality Inventory (MMPI), current color photographs, and information from old charts concerning hospital course. Any patients whose chart indicated

a history of alcoholism, seizure disorder, or hospitalization for any psychiatric reasons were excluded.

The researchers defined a psychiatric complication in the following way:

For the purpose of this study, if a patient is seriously handicapped in any of the four dimensions in which we all function -- in his recreation, to relate lovingly and productively with his family, and to interact with other people whether friends or strangers -- then he can be said to have a significant problem. (p. 789)

Using the preceding criteria, the researchers determined that 6 patients, or 30%, had mild to moderate emotional problems secondary to their burn. The remaining 14 subjects described adjustment problems during the first year that resolved without intervention. Andreasen et al. further reported that there was no correlation between the extent of burn or extent of deformity and the tendency to have problems.

Results of the MMPI revealed that two patients had scores that in a noninjured person would imply seriously decompensated paranoid schizophrenia with marked depression and anxiety. However, the researchers discounted these results since neither subject demonstrated in the interviews any symptoms suggested by the MMPI pattern. Six patients showed depression scales between 70 and 80. The researchers also dismissed this finding since none of these patients appeared to be clinically depressed during the interviews.

Finally, the researchers reported that those individuals who were noted to have adjustment difficulties were young and attractive. They postulated that these difficulties arose because of the individual's

generally immature and narcissistic life style. The data from this study also supported the possibility that women were more prone than men to experience a loss of identity as a result of physical deformity.

The most serious problem with this study is the characteristics of the sample. The mean patient was a 34-year-old, married farmer or blue collar worker, born and raised in Iowa, with a 12th grade education. No one had greater than a 40% burn. Also, each subject had a prior record of good health, no psychiatric history, and no history of alcohol or drug abuse. In analyzing the epidemiology of burn injuries, this is not a representative sample. Since the subjects studied by Andreasen et al. (1970) were healthy young males, they have many advantages that would allow them to make a better adjustment to their trauma than the more typical burn victim.

The researchers' definition of a psychiatric complication, as well as the use of the MMPI, can also be questioned. Although an individual's ability to return to work or to maintain a relationship with his family is important, it does not completely address the issue of the individual's self-concept, coping skills, or feelings of depression or anxiety following a mutilating injury.

The researchers attempted to conduct a more thorough analysis of their subject's adjustment through the use of the MMPI. However, they chose to discount these findings in the eight cases (40% of the sample) where unfavorable results were obtained. Since no other studies had been conducted with burn victims using the MMPI, it was impossible to know if the researchers were accurate in discounting those results. Not only were there no other studies using the MMPI on burn patients, there were no interinventory comparisons. Thus the relative validity of the

MMPI, as compared with other instruments, for assessing long-term adjustment in the severely burned adult had not been established.

Chang and Herzog (1975)

In 1975, Chang and Herzog reported on a group of 51 burn victims ranging in age from 1 to 88 years of age. Ninety percent of the subjects had less than a 30% burn. All of the patients were either personally interviewed or responded to a mailed questionnaire. The following areas were contained in the questionnaire: (a) preburn status of the individual including job or school level, tendency toward depression, alcohol and drug abuse; (b) post-burn status, including job and school status, depression, and alcohol and drug abuse; and (c) a comparison of the person's preinjury social and family associations with current activities. All patients were two years post-burn injury.

The researchers reported that increased disability was related to percent of body surface area burned. The majority of the patients (79%) were able to return to some kind of work or school, although 45% required a change of job. Interestingly, the authors did not address the feelings of those individuals who were forced to change their work. Twenty-five percent were unable to interact with their former peer group at school. Psychological morbidity was manifested by reports of depression (38%), divorce (26%), and juvenile delinquency (14%). Feelings of depression usually were less intense at one year post-injury than they were prior to this time.

Similar criticisms can be directed toward this research as have been made regarding the other studies. These authors did not describe their questionnaire in sufficient detail; hence reliability and validity questions can be raised. Also, the authors failed to report the

demographic data and preburn psychosocial status of the subjects. Also the percent of the burn injury was very low. Only 10% of the sample had greater than 30% burns. These variables may have an important impact on the success or failure of long-term adjustment. Finally, the age range of the sample was from 1 to 88 years. More useful information may have been generated if the age range had been restricted.

Davidson, Bowden, and Feller (1981)

Davidson, Bowden, and Feller (1981) conducted the only study with burn victims that focused on social support and post-burn adjustment. The study was a cross-sectional design consisting of one-time, face-to-face interviews with 320 persons who were treated at a major burn center. The characteristics of the sample included a mean age of 29 years, a body surface area burn of only 23%, and 92% middle class, white adults.

The interview contained a total of 519 items covering a wide variety of topics ranging from standard sociodemographic factors through feelings of satisfaction with specific aspects of treatment received. The results demonstrated that the social support the victim received was directly related to measures of life satisfaction, self-esteem, and participation in social and recreational activities. Furthermore, it appeared that family support was more strongly related to the preceding measures than support from friends or peers.

The previous analysis of the epidemiologic picture of the burn victim is applicable to this study. A sample consisting of primarily white, middle-class adults is not representative of most burn victims based on the previously described epidemiologic profile. Additionally,

the authors provided no discussion of the depth and area of the body burned. This may be crucial information in assessing adjustment. Finally, although the authors stated that family support was correlated to adjustment, they did not define adjustment. No discussion was provided regarding return to work or school or changes in social relationships after the burn.

Blades, Mellis, and Munster (1982)

Researchers at Johns Hopkins University have devised a Burns Specific Health Scale (BSHS) (Blades, Mellis, & Munster, 1982). This scale is composed of 114 items, based on a selection of items from three validated and established instruments. The instruments used were the Sickness Impact Profile, the Index of Activities of Daily Living, and the General Well Being Schedule. In addition, other items specific to burn care were constructed by the researchers and a panel of experts in burn care.

The BSHS was tested on an initial convenience sample of 40 adult burn patients. Preliminary results suggest that patients with burns exceeding 40% total body surface area, as well as those with burns of the face and hands, have significantly higher scores of dysfunction 12 months after their injury. The researchers did not look at preinjury level of functioning because they believed that this area was impossible to validate. Although the researchers would have to rely on self-report measures, important information could be gained by including the patient's perception of his or her premorbid functioning in the analysis. Demographic characteristics of the subjects were not presented. The field testing of the instrument was not complete; thus, test-retest reliability and external validation measurements were not available.

Feller and Bowden (1985)

A draft copy of a comprehensive longitudinal study conducted at the University of Michigan Medical Center has recently been released (Feller & Bowden, 1985). This report summarizes the results of a study conducted from 1959 through 1977. The data analysis revealed that recovery and adaptation to a burn injury is a complex process influenced by many variables. Factors such as severity of the burn, age, past medical history, location of the burn, the causative factor (i.e., flame versus electrical versus scald), significant concurrent injuries, and a host of individual considerations were considered to be crucial.

Three hundred and twenty-five subjects in the study completed Coopersmith's Self-Esteem Inventory and were interviewed using a structured interview schedule developed by the principal investigators. The investigators provided no justification for using such a unidimensional measure of self-esteem. Based on the findings the authors reported the following conclusions:

Findings from this study continue to support the observation made in the 1969 study that the majority of the burn patients treated at the MBC do remarkably well after injury. For example, 85% of the respondents had adequate to high self-esteem and 91% reported an adequate to high satisfaction with the quality of their life. Only 7% of those married at the time of the injury had divorced at interview. A number of single persons at burn had married and were in the process of raising families at interview. The majority of those employed at injury (92%) were able to return to work with the amount of time absent from the work force being determined by many factors, not just size of burn. Forty-two percent of the employed reported that their burn injury had caused them at least some difficulty on the job; the most common problems being complaints related to hand, feet, and leg functioning. Patients who did not return to or took a long time to work were likely to have been seen by a social worker and to have been referred to the Bureau of Rehabilitation (BR). The most frequently cited reason for referral to BR was to arrange for training for a new occupation; however, only half of those

referred reported the contact was helpful in achieving this goal. (pp. 48)

Feller and Bowden did not examine those conditions that may have created differing reactions to the burn injury. No assessments were made of the coping strategies employed by the patients. Thus no information was available that describes how burn victims cope with the numerous changes created as a result of their injury.

#### Bernstein (1976, 1982, 1983)

Bernstein (1976, 1982, 1983) has studied the adaptive mechanisms that an individual utilizes when confronted with a traumatic change in life style. His results are based on case studies of burn victims seen on an outpatient basis following their injury. Bernstein's findings stand in striking contrast to reports that state that most burn victims are well adjusted and suffer few long-term sequelae. He described individuals who were experiencing extreme hopelessness and depression with few resources to draw on as they attempted to cope with the burn injury. Bernstein did not specifically study the coping processes employed by burn victims. However, some coping strategies emerged during the course of his interviews. The coping mechanism most often employed by patients was social withdrawal. Patients also reported frequent daydreaming about what things would be like if they "looked normal." These case studies represent the only information about the coping processes of burn victims.

#### Summary of the Literature in Psychosocial Reactions to Burn Injuries

Burn victims' psychosocial reactions in the first year following the injury are well documented. Very little is known beyond this time. Six major studies, conducted since 1943, suggest that burn victims

experience few long-term sequelae (Adler, 1943; Andreasen & Norris, 1972; Blades, Mellis, & Munster, 1982; Chang & Herzog, 1976; Davidson, Bowden, & Feller, 1981; Feller & Bowden, 1985). The results of the preceding studies appear to be counterintuitive considering the numerous and severe problems created by burn injuries. Burn victims suffer from chronic pain and disfigurement. They frequently undergo years of surgical reconstructive procedures to correct deformities. The financial and emotional impact in the patient and his or her family is great.

Bernstein (1976, 1982, 1983) has criticized the results of the studies addressing the long-term adjustment of the burn victim. He (1983) has primarily questioned Andreasen and Norris's (1972) findings. Andreasen and Norris concluded that most burn victims emerge from their injuries with renewed self-esteem and a sense of triumph over their physical limitations. In response to this conclusion Bernstein wrote:

It is this author's experience that this is true in only a few cases because the overwhelming nature of the social environment's contact precludes this. Our society values appearances so strongly that it does not allow the damaged person much leeway for making a readjustment. (p. 55)

Bowden, Jones, and Feller (1979) reviewed studies conducted prior to 1979 on the long-term adjustment of the burn victim. They concluded that only 15 to 30% of the adults studied since 1943 experienced difficulty in adjusting to the burn injury. Considering the methodological shortcomings in the previously described studies, this conclusion is questionable. However, even if the findings are accurate, the question still remains: What circumstances lead to a "good" adjustment for some burn victims and not for others? This question has

been asked about adjustment to a broad range of physical conditions. As a result, researchers are investigating conditions that may lead to varied reactions to disability.

The literature on psychosocial reactions to burn injuries is not very informative regarding the problems faced by burn victims. Little is known about the patients' interpretations of their problems. Even less is known about how burn victims cope with the numerous hardships imposed by the injuries. However, research in other areas can provide some direction in the study of the burn patient's long-term psychosocial reactions to the trauma.

#### Appraisal of Stressful Situations

The literature on coping and stress contains information that may be utilized in studying burn victims' perceptions of the alterations in life style imposed by their injuries. A discussion of appraisal processes will be presented first, followed by a discussion of coping processes. Before undertaking any analysis of coping strategies, it is important to understand the burn victim's definitions of reality. In any stressful situation, individuals must make a series of judgments about implications for their well being. Based on these judgments or appraisals various coping strategies are employed. Cognitive appraisal is considered to be the key to understanding the coping process.

Lazarus and Folkman (1984) noted that

Even in the most devastating of circumstances, such as the Nazi concentration camps, people differed as to how threatened, disorganized, and distressed they were. Their patterns of coping differed as well. In order to understand variations among individuals in comparable conditions, we must take into account the cognitive processes that intervene between the encounter and the reaction, and the factors that affect the nature of this mediation. If we do not consider these

processes, we will be unable to understand human variations under comparable external conditions. (p. 23)

Many current psychological theorists and researchers have emphasized the importance of understanding situations in terms of their significance to the individual (e.g., Endler & Magnusson, 1976; Lazarus & Folkman, 1984; Rotter, 1954, 1975; Sarason & Sarason, 1985). Without examining the patient's perceptions of his/her burn injury, very little can be understood about the coping strategies the patient adopts. Considering the epidemiologic profile of the burn victim, the definition becomes more crucial. Some patients have prior chronic physical disabilities and a history of substance abuse. Other burn victims have no significant premorbid difficulties. Injuries can take place in a variety of contexts with numerous causes. It is important to understand the background variables that may affect the individual's personal meaning or attitude toward the injury. This meaning in turn influences the patient's emotional and motivational responses to the injury and thus the coping strategies.

In a study of coping strategies and illness, Lipowski (1970-1971) noted that the meaning of illness and disease reflect the sick person's past personal experiences, knowledge, cultural background, and beliefs. Lipowski described two common views that were held by his subjects toward illness: illness as a challenge and illness as an enemy. Those individuals who saw disease and disability as a challenge tended to seek medical advice and information and engaged in a wide range of daily activities. In contrast, those individuals who viewed disease as an invasion by inimical forces were more passive and helpless. These subjects described a great sense of anxiety and exhibited extreme

dependency on significant others. According to Lazarus and Folkman (1984), a recognition of beliefs such as these helps to bring understanding to coping behaviors that might otherwise appear to be inexplicable in relation to the demands posed by an illness.

Andreassen et al. (1970) and Feller and Bowden (1985) reported that there does not appear to be any consistent relationship between the extent of a burn injury and a patient's feelings of self-esteem and life satisfaction. A better understanding of this finding would be obtained if the appraisals of the burn victim were incorporated into the analysis. For example, a burn injury to the lower legs would be a relatively minor, easily concealed injury. However, if the individual with this injury were required to do a lot of walking related to a job, the meaning of the disability would become far more serious than for someone with a sedentary occupation.

In six of the studies that addressed the long-term adjustment of burn victims, subjects were asked to complete questionnaires and/or standardized instruments. Many of the questions posed by the researchers concerned the patient's functional status. The emphasis in these studies was assessing the patient's ability to resume preburn activities. Resumption of preburn roles was then equated with a "good" outcome. The resumption of prior activities is an important area for consideration. However, it does not help to clarify the questions of why some patients readily engage in preburn activities and others do not. An emphasis on functional status also does little to clarify the finding that some patients with minor burn injuries are more debilitated than patients with major burn injuries (Andreassen & Norris, 1972; Feller & Bowden, 1985). A greater emphasis on the patient's appraisal of the

situation may serve to elucidate some of these issues. Future research needs to focus on the burn victim's definitions of the reality created by the injuries.

The relationship between the appraisal process and the epidemiologic profile of the burn victim has been totally ignored by researchers in the area. Bernstein (1983) reported that the majority of his patients had limited financial and educational resources. In contrast, Andreasen et al. (1972) and Bowden and Feller (1985) studied only white, middle-class subjects. Yet these characteristics were not addressed by the researchers as they presented their results.

It would be impossible to understand the stress imposed by the burn injury without reference to the social context in which it occurs. Pearlin and Lieberman (1979) noted that information related to characteristics such as sex, race, marital status, and socioeconomic background is of paramount importance. These characteristics serve to organize and structure an individual's experiences in life. Lazarus and Folkman (1984) cautioned that there can never be an automatic connection between social and psychological levels. However, the two are related because psychological processes are imbued with, shaped by, and reflect social values. These values and beliefs in turn affect the appraisals that an individual makes as well as the repertoire of coping strategies that are available in response to a threat.

Future studies need to place greater emphasis on the demographic characteristics of burn victims. Response to chronic illness and disability is partially determined by an individual's social group membership (age, sex, ethnicity, socioeconomic status, and religious orientation) (Dimond, 1982). Dimond (1982) noted that demographic

indices must be included in every study related to chronic illness and disability. Knowledge of the patient's demographic background may lead to a greater understanding of the appraisal and coping processes used as a response to the burn injury.

### The Coping Process

Coping is seen as a major factor in understanding psychosocial reactions to chronic disabilities (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Folkman, Lazarus, Gruen, & DeLongis, 1986; Pearlin, 1983). Current conceptualizations of coping emphasize a process-oriented approach as opposed to a trait-oriented approach (Folkman, 1984). Trait-oriented approaches focused on the role of stable personality characteristics in the choice of coping strategies. In process-oriented approaches, the context in which the coping behavior occurs is a critical factor. Coping thoughts and actions are always directed toward particular conditions. The psychological and environmental demands of a given situation interact with the person's appraisal or assessment of that situation to produce various coping behaviors. Mendelsohn (1979) noted that "each patient faces a particular set of circumstances within the context of a unique personal history" (p. 67).

Burn victims must cope with an enormous number of demands or role strains (Pearlin, 1983) as a result of their injuries. Role strains are the hardships, challenges, and problems that people experience over time as they engage in their social roles. These strains can threaten the self and open the inner doors to stress. Coping behavior is seen as an effort to modify the threatening aspect of stressful situations (Pearlin, 1983).

The problems of the burn victim are striking in terms of their number and in terms of their chronicity. With most illnesses or injuries, patients reasonably can expect to recover. A severe burn is unlike any other acute life-threatening illness. There is pain, the consequences are life-long, and the victim is never free of the disfigurement or the need to give special care to the scar tissue. The role strains experienced by the patient persist with tenacity. Only some of the difficulties that the patient experiences are created by the tragedy of the burn. Again, the epidemiologic studies that suggest that approximately 50% of the victims have preexisting chronic disorders in addition to educational and financial limitations are important (Crikelair, Symonds, Ollstein, & Kirsner, 1968; MacArthur & Moore, 1975; Noyes, Frye, Slymer, & Canter, 1979).

Prior to the injury, the burn patient and the family may have faced occupational strains and financial hardships. The burn injury is superimposed on these preexisting difficulties. Old problems are exacerbated and new problems are created as a result of such a devastating trauma. The patient must adjust to a loss of some roles and a change in others. As Thoits (1985) noted, undesirable changes in role relationships are likely to threaten the self. Threats to the self can have negative emotional impacts through loss of identity and feelings of belonging, self-esteem, and mastery of the environment. These threats may be mollified by coping behaviors.

Coping can be viewed as having two major functions: the regulation of emotions or distress and the management of the problem that is causing the distress (Folkman, 1984; Lazarus & Folkman, 1984). The former is referred to as emotion-focused coping and the latter as problem-focused

coping. Both types of coping are used in most stressful encounters. First noted by Mechanic in 1962, numerous researchers have subsequently supported these two functions of coping behaviors (Lazarus & Folkman, 1984; Murphy, 1974; Pearlin, Menaghan, Lieberman, & Mullan, 1981).

There is a wide range of emotion-focused forms of coping. Typically, all of these forms involve a reappraisal of the event without changing the objective situation. Selective attention or avoidance of certain aspects of the stressful situation are a major aspect of the cognitive reappraisals (Lazarus & Folkman, 1984). Pearlin (1983) suggested that devaluing roles that are a source of pain is another facet of emotion-focused coping.

Problem-focused strategies are directed toward defining the problem, exploring alternatives, and ultimately acting on the available options. Although both problem-focused and emotion-focused strategies are employed in stressful encounters, their frequency of use can vary depending on the individual's appraisal of the situation. Emotion-focused strategies are more readily employed when there has been an appraisal that nothing can be done to alter the threatening circumstance. Conversely, problem-focused forms of coping are utilized when the person had determined that the situation is amenable to change.

This distinction has important implications for burn victims. Certain changes created by the injury cannot be altered by the patient. They call for emotion-focused coping strategies. Other situations only can be modified to a certain extent. For example, patients can undertake a variety of measures to control the amount of scarring they will suffer. However, it is impossible to avoid scarring altogether and

regain a preburn appearance. Here the patients must use both emotion-focused and problem-focused strategies. The extent to which the patient focuses on controllable versus uncontrollable facts of the situation will determine the choice of coping strategies. The patient's emphasis will be determined by his or her personal history, social background, extent of the injury, social support, and the resultant cognitive appraisals.

### Adaptational Outcomes

A major difficulty in studying coping processes among victims of life crises is that successful adaptation to the crisis is the outcome of major interest. Unfortunately, there is no consensus on how to define successful adaptation (Kessler, Price, & Wortman, 1985). In examining outcomes, Bernstein (1983) asserted that active movement on the part of the burn victim toward "normality" and "assertiveness" in dealing with handicaps is a reasonably good prognostic measure. However, Bernstein did not define the terms -- his statement was so broad that its usefulness in assessing outcomes is negated.

Lazarus and Folkman (1984) stated that there are three kinds of adaptational outcomes. These are functioning in work and social living, morale or life satisfaction, and somatic health. Defining and measuring these outcomes are a major source of conflict among researchers. Typically, individuals are administered a test designed to measure "well-being." Their scores are then compared to group norms. After reviewing instruments designed to measure social functioning, Platt (1981) concluded

the ideal world is characterized by harmony, happiness and consensus, and inhabited by men and women who are consistently interested, active, friendly, adequate, guilt-free, nondistressed,

and so on. If they show anything less than interest in their work they are maladjusted. (p. 106)

Lazarus and Folkman (1984) noted that group norms are of questionable value when evaluating individual performance in a specific context.

A major outcome of interest in the studies that have been conducted with burn victims is return to work or school. While resumption of preburn role is an important criterion, it should not be the only criterion used to gauge adaptation. With the exception of the work by Bowden and Feller (1985) and Bernstein (1976, 1982, 1983) morale and life satisfaction has been ignored in the assessment of adaptation to a burn injury. Certain coping strategies have been associated with a positive sense of well-being in the face of adverse circumstances. Lazarus and Folkman (1984) suggested that morale depends on the tendency to view illness as a challenge and to positively reappraise the situation.

Somatic health is another important outcome of interest in studying burn victims. Many patients must undergo years of treatment upon discharge from the hospital. They must also continually give special care to the healed skin for the rest of their lives. The patient's ability to meet these demands may depend on the cognitive appraisals of the disability and resultant coping strategies.

#### Summary of Appraisal and Coping Literature

Lazarus and Folkman (1984) advocated studying the appraisal and coping process in a variety of specific contexts. The problems encountered and the coping strategies employed vary depending on the specific demands of the illness. The literature related to appraisal and coping can provide direction to the study of burn victims' psychological reactions toward their injuries. Researchers in the area

of burn rehabilitation have neglected to ask some rather obvious questions. What are burn victim's perceptions of their injuries? How have they coped with the changes in their lives imposed by their injuries? The two preceding questions formed the basis for the present study. An analysis of the appraisal and coping processes used by burn victims may enhance the ability of health care professionals to engage burn victims in psychosocial rehabilitation programs.

Appraisal processes are considered to be the key to understanding coping behaviors. Cognitive appraisal involves a complex series of judgments about the seriousness of the threatening event and the coping strategies that may be adopted. Demographic variables may have a profound effect on the subjects' definition of the situation. This is an area that has largely been ignored by researchers investigating burn victims' reactions to the trauma. Demographic variables will be included in the analysis of appraisal and coping processes in this study.

Once an appraisal is made, the individual typically engages in a variety of coping behaviors. Coping behaviors fall into two broad categories: emotion-focused and problem-focused strategies. Both types of strategies are likely to be employed by the burn victim as he or she encounters the many and varied problems created by the burn injury. Demographic characteristics and other background variables (such as premorbid history of chronic illness and/or substance abuse) may influence the choice of coping strategies. In this study, the subjects' coping behaviors were analyzed in relationship to the extent and location of burn injury, demographic variables, and premorbid history.

This type of analysis had not been conducted with a sample of burn victims.

Certain coping strategies have been associated with the tendency to return to pre-illness levels of functioning. Problem-focused strategies that involve actively confronting the difficulties imposed by a disability are more likely to result in improved health and morale (Larazus & Folkman, 1984). An assessment was made of the subjects' coping strategies and resumption of preburn activities.

### CHAPTER III METHODOLOGY

#### The Research Perspective

The purpose of this study was to explore the appraisal and coping processes employed by burn victims. Qualitative research methods were used in the study. Qualitative researchers employ methods or data gathering techniques which generate narrative as opposed to numerical data. Examples of qualitative methods include ethnography, case study, indepth interviews and participant observation (Knafl & Howard, 1984). Qualitative research has also been called naturalism or naturalistic inquiry (Lofland & Lofland, 1984). In describing a qualitative, naturalistic research approach Lincoln and Guba (1985) noted,

Rather we suggest that inquiry must be carried out in a "natural" setting because phenomena of study, whatever they may be -- physical, chemical, biological, social, psychological -- take their meaning as much from their contexts as they do from themselves. No phenomenon can be understood out of relationship to the time and context that spawned, harbored and supported it. (p. 198)

An emphasis is placed on understanding a situation within a particular context from the subject's perspective.

Hewitt (1984) noted that human behavior must be viewed as a social interaction that occurs within defined situations. An important implication arises from this perspective. "Even the most routine situations to be observed in everyday life are filled with the possibility for novelty, change, the unexpected turn of events" (Hewitt,

1984, p. 179). Many of the situations in life are indeterminate. Lincoln and Guba (1985) asserted that the investigator is the main research instrument in naturalistically based studies because "only the human instrument has the characteristics necessary to cope with an indeterminate situation" (p. 193).

Qualitative methods were chosen to study appraisal and coping processes used by burn victims for several reasons. To gain an understanding of the coping process, Lazarus and Folkman (1984) recommended indepth analyses of specific situations. Appraisal and coping need to be assessed with respect to the problems posed by a particular illness or disability. Not only do different illnesses create different problems, but coping strategies may vary widely across circumstances. Therefore, coping must be studied within a particular context (Lazarus & Folkman, 1984). Qualitative methods are well-suited for understanding behavior in its social context.

Qualitative methods also were chosen due to the exploratory nature of the study. As previously noted, researchers in the area of burn care and rehabilitation have neglected to ask some basic questions regarding the impact of the burn injuries on the subjects' lives. Appraisal and coping processes have not been studied with a group of burn victims. Knafl and Howard (1984) noted that qualitative studies often provide the "empirical grounding" for later quantitative research (p. 18). The information gained as a result of this study may form the foundation for future work.

Glaser and Strauss (1966) cautioned that "qualitative research — quite apart from its usefulness as a prelude to quantitative research — should be scrutinized for its usefulness as an end product" (p. 56).

They noted that qualitative research is often the best and most efficient method for obtaining information about active, developing situations. "The accurate and detailed description of a point of view, a social world, is the major contribution of qualitative research" (Knafl & Howard, 1984, p. 18).

In this study, the major data collection tools were ethnographic or indepth interviews, analysis of nonverbal cues, and document analysis. In this chapter, the research setting will be described including the selection of the site and procedures for gaining access to the site. This will be followed by a section describing the procedures for selecting participants for the study. The research methods and interview procedures will be presented followed by a discussion of validity.

### The Setting

#### Selection of Research Site

Initially, the subjects were treated at a burn unit that was part of a referral system within a large Southeastern university teaching hospital. Patients were referred from various parts of the Southeastern United States for treatment at the burn unit. Subjects who resided outside of the State of Florida or in the Miami - Ft. Lauderdale area were not included in the study. These subjects were excluded because of the travelling distances involved.

#### Gaining Access to the Site

Approval for the research was obtained from the Professor and Chief, Division of Plastic Surgery, College of Medicine, University of Florida. A list of all subjects treated at the burn unit from 1978 through 1986 was given to the researcher. Records for patients treated prior to 1978 were incomplete.

### Procedures for Selection

The list of patients admitted to the burn unit from 1978 through 1986 was compared to a log book kept by the head nurse in the burn unit. The log book contained information regarding the patients' hometown, extent and depth of injury, and final disposition (i.e.; discharged, deceased, transferred to another facility). All of the patients who resided outside the state of Florida or in the Miami - Ft. Lauderdale area were excluded. Patients who were deceased were removed from the list. The remaining names were compared to the log book so that a final list was formulated containing subjects who met the following criteria.

The individuals chosen for the study were 18 years of age or older. All subjects had second or third degree burns over greater than 15% of their total body surface area (TBSA). Subjects with less than a 15% TBSA burn were included in the study if they had third degree burns to the hands or the face. All subjects were at least one year post injury. There was a strong consensus in the literature regarding the burn victim's social and psychological functioning during the first year after the injury. Since there was little understanding of the burn victim's functioning beyond the first year, subjects were interviewed after this time.

A final list of 312 patients was generated. Thirty subjects were selected from the list. Ten of the originally selected subjects were no longer living at the address provided by the hospital. Therefore, 10 more subjects were selected. Seven of these 10 subjects could not be contacted and 7 more subjects were selected. A total of 17 subjects could not be contacted because a current address was unavailable. Subjects were contacted by the researcher by mail (Appendix A). Within

three days after mailing the letter, the researcher contacted the subject by telephone. During the telephone conversation the researcher reiterated the purpose of the study, answered questions, and arranged for an appointment for the initial interview. The subject was asked to name the person who had provided the greatest amount of support and assistance since the injury. This person was interviewed for the purpose of corroborating the information that was provided by the burn patient. Only one subject refused. Another subject was selected from the list and interviewed. Later the subject who refused called the researcher and requested an interview. Two subjects with middle-class backgrounds were selected to provide more information related to the middle-class group. Thirty-three subjects were included in the final sample. The participants are described in the next section.

### Participants

Table 3-1 contains medical and demographic information for each subject. The subjects' real names were not used to protect their privacy. The subjects' ages ranged from 25 through 68 years. Fourteen subjects were 12 to 24 months post-burn injury. Five subjects were injured in 1979. Three subjects were injured in 1980. The remaining subjects were three to five years post burn injury.

The extent of the burned areas varied, ranging from 10% through 95%. Shown in Table 3-2 by social class (see below), is a distribution of these subjects based on the extent of burned area. The causes of the accidents also varied. Nine subjects were injured in industrial accidents. Four subjects were involved in plane crashes. Seven subjects were injured in car accidents. Two burn victims were hurt in boat accidents. Seven subjects were involved in house fires. The

Table 3-1. Description of the Subjects

<u>Name</u>	<u>Current Age</u>	<u>TBSA Injured</u>	<u>Alcohol Use</u>	<u>Marital Status</u>	<u>Cause of Accident</u>	<u>Pre-Injury Total Family Income</u>	<u>Education</u>	<u>Occupation</u>
1. Michael	30	33%	Yes	Married	Unknown, possibly a camp fire.	\$13,000	High School	Disabled, Fern trimmer
2. Thomas	25	10% Full thickness to hand	Yes	Married	Hot tar	\$10,000	10th Grade	Disabled, Roofer
3. John	32	18%	No	Married	Oily rags caught fire	\$25,000	College Graduate	Computer Programmer
4. Julie	30	95%	No	Divorced	Plane crash	\$10,000	High School	Former Bank Teller
5. George	53	85%	Yes	Married	Hot asphalt	\$15,000	10th Grade	Disabled, Maintenance man
6. Larry	45	10% Full thickness to hand	No	Divorced	Electrical panel	\$20,000	High School	Disabled, Electrician
7. Alex	40	63%	No	Married	Car accident	\$35,000	College Graduate	Business Manager
8. Richard	35	62%	No	Married	Van exploded	\$32,000	College Graduate	Accountant
9. Clinton	50	80%	No	Married	Explosion at a shingle factory	\$12,000	11th Grade	Disabled, production line worker

Table 3-1 --- continued

	<u>Name</u>	<u>Current Age</u>	<u>TBSA Injured</u>	<u>Alcohol Use</u>	<u>Marital Status</u>	<u>Cause of Accident</u>	<u>Pre-Injury Total Family Income</u>		<u>Education</u>	<u>Occupation</u>
10.	Janice	30	25%	No	Married	Cooking	\$38,000		College Graduate	Artist
11.	Virginia	67	25%	No	Widowed	House fire	\$14,000		High School	Retired secretary
12.	Catherine	28	19%	No	Single	Bomb exploded	\$15,000		High School	Secretary
13.	Jay	59	70%	No	Married	Explosion at a chemical plant	\$14,000		High School	Disabled, Maintenance man
14.	Joe	43	25%	Yes	Married	Resin tank exploded	\$15,000		High School	Foreman
15.	Sam	34	65%	Yes	Married	Plane crash	\$11,000		High School	Janitor
16.	Mary	28	25%	No	Married	Car engine exploded	\$27,000		Junior College	Store owner
17.	Carl	24	22%	Yes	Single	Battery acid	\$16,000		High School	Construction worker
18.	Jim	27	18%	No	Single	Mixing chemicals	\$12,000		College Graduate (Graduate student)	Chemist
19.	Terry	30	30%	Yes	Married	Firecrackers	\$10,000		High School	Disabled, Factory worker

Table 3-1 -- continued

Name	Current Age	TBSA Injured	Alcohol Use	Marital Status	Cause of Accident	Pre-Injury		
						Total Family Income	Education	Occupation
20. Phillip	68	20%	No	Married	House fire	\$14,000	High School	Retired factory worker
21. Tracy	30	35%	No	Married	Plane crash	\$20,000	High School	Former model, housewife
22. Gary	31	66%	Yes	Divorced	Car accident	\$10,000	8th Grade	Disabled, horse groomer
23. Emma	40	56%	No	Married	Household accident	\$18,000	11th Grade	Housewife
24. Susan	44	42%	No	Married	House fire	\$20,000	High School	Housewife
25. Tony	37	28%	Yes	Married	Car accident	\$16,000	High School	Construction worker
26. Paul	30	18%	No	Married	Plane crash	\$20,000	College Graduate	Law student
27. Jack	36	19%	Yes	Married	Industrial accident	\$17,000	High School	Foreman
28. Kyle	38	15%	Yes	Single	Boat accident	\$18,000	High School	Mechanic
29. Roy	44	30%	No	Married	Gas can exploded in car	\$34,000	College Graduate	Regional manager for company

Table 3-1 --- continued

	<u>Name</u>	<u>Current Age</u>	<u>TBSA Injured</u>	<u>Alcohol Use</u>	<u>Marital Status</u>	<u>Cause of Accident</u>	<u>Pre-Injury Total</u>		
							<u>Family Income</u>	<u>Education</u>	<u>Occupation</u>
30.	Nancy	41	55%	Yes	Married	Boat accident	\$15,000	High School	Assembly line in factory
31.	Tim	24	15%	No	Single	Grease fire on stove	\$12,000	High School	Store clerk
32.	Peggy	35	50%	No	Married	Car accident	\$35,000	College Graduate	Housewife
33.	Bryce	40	47%	No	Single	House fire	\$32,000	College	Builder

Table 3-2. Distribution of the Sample by Social Class and Extent of Burned Area

<u>Middle-Class Subjects (Class III)</u>	<u>Number</u>
> 60% TBSA	2
40-50%	2
18-30% TBSA	6
<u>Lower-Middle-Class Subjects (Class IV)</u>	
10-30% TBSA	12
31-45% TBSA	3
55-75% TBSA	5
> 80% TBSA	3

Table 3-3. Distribution of the Sample by Selected Demographic Variables

<u>Income</u>	<u>Number</u>
\$10,000 to \$15,000	16
\$16,000 to \$20,000	9
\$21,000 to \$25,000	1
> \$26,000	7
<u>Occupations</u>	
Semi-skilled workers	15
Skilled worker	7
Student	2
Housewife	4
Managerial/professional	5
<u>Educational Level</u>	
9th grade - 11th grade	5
High school graduates	18
Junior college graduate	1
College graduates	9

remaining four subjects were injured in unusual ways, ranging from a cooking accident to a bomb explosion.

Information related to income, occupation and educational levels was obtained for all the subjects. The demographic data is summarized in Table 3-3. The subjects were placed in categories according to Hollingshead's (1975) description of social classes.

In this system, there are five social classes with Class I being the highest and Class V the lowest. There are many different descriptions of social class. The most popular method to classify subjects involves a determination of years of education, occupation and total family income (Holahan & Moos, 1987). None of the methods are perfect. According to Hollingshead (1975), his classification method is for "conceptualizing and indexing the population into categories that have relevance in everyday behavior" (p. 6).

Class I families are usually from wealthy, well established backgrounds. They are well educated and hold administrative or independent professional positions. Class II individuals are managers and professionals with little or no inherited wealth. Usually, they are college graduates. Some Class III individuals are college graduates. The majority of people in this category are employed in various managerial and technical positions. People in this group often consider themselves "middle class." Class IV is comprised of individuals who are skilled and semi-skilled manual workers. Some of them have completed high school; many have not. Individuals in this category identify themselves as "lower-middle class" or "working class." People in Class V work in low paying, unskilled jobs. Few of them have completed high school. Many are unemployed and economic insecurity is high.

As was shown in Table 3-2, the subjects in this study were either placed in Class III or Class IV. The Class III burn victims were primarily college graduates with managerial or technical positions. One subject in this group was a small store owner. Ten subjects were placed in this category. The Class IV subjects in this study were either skilled or semi-skilled employees. Eighteen of these subjects were high school graduates. There were 23 total subjects in Class IV.

### Research Methods and Interview Procedures

#### Overview

According to Spradley (1979), ethnography is a cyclic process where the researcher asks questions, collects data, and analyzes the data again and again. The steps in data analysis have been identified as (a) asking ethnographic questions, (b) making an ethnographic record, and (c) analyzing ethnographic data. As a result of an ongoing process of data analysis more questions emerge and observations become more focused. In an ethnography, data analysis is an integral part of the research process rather than an end point. Lincoln and Guba (1985) noted that "on site, the investigator must engage in continuous data analysis, so that every new act of investigation takes into account everything that has been learned so far" (p. 209).

The use of a cyclical research approach differs from the typical quantitative research model in which the researcher states hypotheses, collects data to test the hypotheses, analyzes the data, and draws conclusions. An ethnography does not emerge in a linear fashion and new questions may arise as the research progresses. However, there are a series of steps or elements in ethnographic research that are an important part of the design. These components will be described in the following sections.

### Asking Ethnographic Questions

Ragucci (1972) noted that

The final goal of which the nurse ethnographer should never lose sight is to grasp the patient's point of view, relation to life, to his vision of the phenomenon of health and illness. (pp. 489-490)

Through a process of asking questions, receiving answers, and asking more questions, the researcher attempts to understand the perspectives of the people being studied. While the researcher begins the study with some predetermined questions, new questions arise as the research progresses. The researcher attempts to understand a social setting from the point of view of its participants so precise predictions regarding the emphasis or focus of the study are not possible. According to Lincoln and Guba (1985), "it is difficult to find an appropriate balance between settling on an appropriate focus for a study while resisting, on the one hand premature closure, and, on the other, changes that ought not be made" (p. 285). In this study two broad questions were used to provide the focus for the research:

1. What are the burn victims' perceptions or appraisals regarding the effect of the injury on their lives?
2. What coping strategies have the burn victims employed as a result of the injury?

The additional questions, listed below, provided further structure for the study. These questions were addressed during the interviews. In addition, further information was obtained from the subjects' medical records. The procedures that were followed for obtaining and reviewing the medical records will be described in a later section.

1. Is there a relationship between the demographic characteristics of the subjects (age, sex, marital, and socioeconomic status) and the subjects' cognitive appraisal of their injury?

2. Is there a relationship between the demographic characteristics of the subjects and the subjects' coping strategies?

3. Is there a relationship between the extent of the burn and the subjects' cognitive appraisals coping strategies?

4. Is there a relationship between the appraisal and coping process and resumption of preburn activities?

5. Is there a relationship between the caregiver's description of the burn victim's appraisal and coping process and the burn victim's self-assessment?

Spradley (1979) has delineated a taxonomy of ethnographic questions that was used throughout the interviews in this study. The broad categories within the taxonomy are as follows:

1. Descriptive questions. Descriptive questions are primarily used during the initial phases of the interview. These questions are broad in nature and serve as the foundation for the interview. Often descriptive questions can lead to lengthy descriptions from the subject. An example of a descriptive question that was used in this study is "What is a typical day like for you since you have been burned?" This question elicited a general description from the subject about some of the changes in his or her life created by the injury.

2. Structural questions. Structural questions are intended to compliment descriptive questions, Spradley (1979) recommended interspersing structural and descriptive questions throughout the interview. Structural questions encourage the subject to elaborate

further on a particular topic or category. They also encourage the subject to provide specific examples to illustrate his or her points. The following example of a structural question was taken from ethnographic interviews conducted with a burn victim in April, 1986.

"You said that you have a lot of pain in your legs and feet, particularly in the afternoon. What kinds of thing do you do when you legs and feet start to hurt?"

This question allowed the subject to elaborate further on the problem of pain following a burn injury. As a result of this question, the subject described three different strategies he used to cope with the pain.

3. Contrast questions. Contrast questions are asked after the researcher has had the opportunity to analyze the data obtained from the initial interviews. Contrast questions can take one of several different forms. However, the basic purpose of the contrast question is to further explore similarities or differences within topics or categories. An example of a contrast question is taken from an earlier ethnographic interview with a burn victim in March, 1986.

"You said that your values and priorities have changed since you were burned. Can you tell me how your values are different now as compared to the values you had before you were burned?"

As a result of this question, the respondent described how he viewed problems as challenges to be met. This provided information related to coping strategies used by this particular subject.

These three types of questions were utilized throughout the interviews. Further methods for data collection will be described in the next section. This is followed by a description of the data analysis techniques.

### Collecting Ethnographic Data

A variety of methods are employed in an ethnographic study. Indepth interviews, participant observation, analyzing nonverbal cues, and document analysis are a few of the techniques that can be used to collect information (Lincoln & Guba, 1985). The choice of methods depends on the unique characteristics of each setting. Lincoln and Guba (1985) recommended the use of a variety of methods to enhance the credibility of the findings.

Denzin (1978) has also recommended the use of several different methods of measurement, or triangulation. If the results obtained by various techniques are similar, then the credibility of the findings is enhanced. Three methods of data collection were used in this study. These methods were indepth interviews, document analyses, and analysis of nonverbal cues. Each one of these methods will be described in the following section.

### Interviewing

Lincoln and Guba (1985) stated that an interview is a "conversation with a [research] purpose" (p. 268). Although the core questions previously described will form the basis for the interviews, the interviews will be largely unstructured. In an unstructured interview the respondent provides both the questions and the answers (Lincoln & Guba, 1985; Spradley, 1979). Lofland and Lofland (1984) called unstructured or intensive interviewing "guided conversations." As a result of information provided by the subjects during the course of the discussion, new questions will be raised. Lofland and Lofland (1984)

recommended developing on interview guide. This guide is described as a

list of things to be sure to talk about when talking to the person being interviewed. You want interviewees to speak freely in their own terms about a set of concerns you bring to the interaction, plus whatever use they might introduce. Thus, interviews might more accurately be termed guided conversation. (1984, p. 59)

All of the participants were interviewed in their homes. Thirteen subjects owned a home. Eleven houses were small, three bedroom dwellings. Three of the 11 houses were located in modest subdivisions. The remaining 8 houses were located along dirt roads and pathways. Two of the homes were large and located in nice subdivisions. Fourteen subjects lived in mobile homes. Two of the mobile homes were located in designated mobile home parks. The rest were located along dirt roads. Four subjects lived in apartments. Two of the apartment buildings were student oriented. Two subjects lived in apartment buildings with all black residents.

All of the subjects kept the inside of their homes clean. Some of the homes were sparsely furnished with old furniture. Other homes were cluttered with various knick-knacks. Nine subjects invited the researcher to conduct the interviews in their living rooms. The remaining subjects wanted to be interviewed in their kitchens.

During the initial phases of the interviews, family members and/or friends remained secluded in bedrooms. Televisions were turned off and children were kept quiet. Most of the subjects offered soft drinks, coffee, food, or cigarettes to the researcher at frequent intervals throughout the interviews.

Twenty-six subjects were interviewed on two separate occasions. Seven subjects refused a second interview. Four of these subjects had small burn injuries and reported that they had nothing more to discuss related to their injuries. Three subjects who refused a second

interview were involved in Workman's Compensation reviews. They also stated that they did not want to discuss their injuries further. The person designated by the burn victim as the primary caregiver was interviewed after the interviews with the burn victim were completed (Appendix B and Appendix C).

### Document Analysis

After the subject had agreed to participate in the study, his or her medical record was obtained from the medical records section in the hospital. These records contained information concerning the depth, extent, and location of the burn; premorbid history; progress notes during the course of the hospitalization; and a record of follow-up clinic visits (Appendix D).

### Nonverbal Cues

Gestures and body language are subsumed under the category of nonverbal cues. Lincoln and Guba (1985) noted that it is often difficult to attend to all of the nonverbal cues that occur during the interview. However, the researcher should record those cues that seem to conflict with the verbal messages given by the subject.

The interviewer or observer who notes such disjunctions can pursue them (preferably not at the time they occur) in order to probe more deeply into the information then provided and noticed. And of course such questionable information can be subjected to more strenuous triangulation or other confirmatory efforts. (Lincoln & Guba, 1985, p. 276)

### Making an Ethnographic Record

All subjects were asked if the interviews could be tape recorded. All of the subjects agreed. The researcher took notes only on the subject's appearance and nonverbal cues during the interview. Immediately after the interview, the researcher made notes regarding the

subject's residence and expanded the description of the subject's appearance and nonverbal behavior. All tapes were transcribed as soon as possible after the interview and the tapes were erased to protect confidentiality.

Spradley (1979) also recommended keeping a field work journal. In this journal, the researcher recorded personal feelings and concerns that arose as the study progresses. Since the researcher was the primary research instrument, the journal helped the researcher be aware of biases and reactions.

Data analysis was conducted using field notes, transcribed interviews, and medical records. The procedure used for analyzing ethnographic data is described in the next section. This will be followed by a discussion of validity. Once the tapes were transcribed, a formal protocol existed for data analysis.

#### Analyzing Ethnographic Data

Spradley's (1979) model was used to analyze the data that were in the form of protocols typed from field notes and audiotapes. The cyclic process of posing questions, collecting data, and analyzing the data was continued throughout the study. Spradley's four phases of data analysis are as follows:

1. Domain analysis is the first step in analyzing the data.

Domain analysis is the search for "semantic relationships" or categories of meaning (Spradley, 1979, p. 108). These categories are determined by reading the protocols and asking how the objects and events fit into unique categories. Spradley (1979) suggested nine different relationships that can be used to question the data and search for semantic domains. For example, the following questions were asked while

reviewing interview protocols: What kinds of problems do the subjects describe? What kinds of activities do the subjects engage in? Domain analysis was continued throughout the study. The domain analysis provided an overview of the problem that was being studied. Based on the domain analysis, structural questions were formed for use in subsequent interviews.

2. Taxonomic analysis is the second phase of the process. In a taxonomic analysis the researcher attempts to determine how domains are related or organized. A taxonomy is a way to visualize the way that behaviors and events fit together. Often taxonomies are represented by lines and nodes or other diagrams. This approach was used as needed in the study to provide a clearer picture of the relationships among domains. Contrast questions were formulated to verify the taxonomies that were constructed.

3. Componential analysis is the search for characteristics or attributes associated with the domains. Spradley (1979) defined an attribute as "any element of information regularly associated with a symbol" (p. 174). By searching for attributes, the researcher can determine whether the identified domains are discrete elements in the study. Spradley recommended searching for contrast as a part of componential analysis and entering the information on a paradigm. Organizing the information in this format helped the researcher to identify questions for future interviews.

4. Theme analysis was the last step in the data analysis process. A theme analysis was done to make sense of the whole. Spradley (1979) defined a cultural theme as "any cognitive principle, tacit or explicit, recurring in a number of domains and serving as a relationship among

subsystems of cultural meaning" (p. 186). A theme is not likely to encompass all of the domains. However, it should include several domains.

A constant interaction between data collection and analysis occurred as a part of the study. Questions that emerged from the data guided subsequent interviews. Since the researcher is the primary research instrument, questions regarding validity and objectivity may be raised. Some of these issues are addressed in the following section.

#### Validity

The credibility of qualitative research is often questioned. Lincoln and Guba (1985) suggested some techniques designed to increase the likelihood of producing valid findings. The first technique involves the research activities of prolonged engagement, persistent observation, and triangulation. Some of these activities have already been addressed in previous sections. All of the subjects were interviewed in their homes for two to six hours. Twenty-four subjects were interviewed on two occasions. The person designated as the caregiver also was interviewed. This gave the researcher the opportunity to interact with the patient and the significant other at different points in time.

Persistent observation involves focusing on the relevant characteristics of the problem that is being studied. The process of data analysis that was used in the study forced the researcher to review the protocols for relationships and categories. This constant review and analysis served to provide depth and focus to the study.

The technique of triangulation has already been described and involved the use of several methods of data collection. These methods

include indepth interviews, document analysis, and analyses of nonverbal cues. The technique of triangulation coupled with the constant questioning of the data are important components of qualitative research.

Kirk and Miller (1986) described the major errors that can be made in any research:

Believing a principle to be true when it is not (i.e. mistakenly "rejecting the null hypothesis") is called "type one error." It is not the only possible kind. "Type two error" is rejecting a principle when in fact it is true. "Type three error" is asking the wrong questions. Asking the wrong questions actually is the source of most validity errors. (p. 30)

Kirk and Miller (1986) supported the use of a variety of measures within a qualitative study to guard against asking the wrong questions.

Lincoln and Guba (1985) asserted that a careful process of data analysis will enhance the researcher's ability to remain focused and ask the right questions.

Glaser and Strauss (1966) emphasized that a qualitative researcher should have confidence that his or her findings form a systematic, accurate statement of the matters studied. This confidence arises from the knowledge that careful plans were made prior to the beginning of the study. Although portions of the study emerge and unfold, various elements of the design are specified in advance (Lincoln & Guba, 1985). This chapter represents an attempt to specify as many facets of the study as possible to enhance the credibility of the findings.

## CHAPTER IV THE APPRAISAL AND COPING PROCESS

### Overview

#### Introduction

The purpose of this study was to explore the appraisal and coping processes used by burn victims. Little is known about how burn injuries change victims lives and how victims perceive those changes. Even less is known about how burn victims cope with the alterations in their lives. Burn victims face pain, permanent disfigurement, and the need for continual medical care. Some never resume their former lives. They must change jobs and abandon recreational activities that were once a part of their lives. Such severe changes cause untold and unexamined amounts of stress. Psychologists contend that in stressful situations, individuals assess the significance of the event. Based on their assessments or appraisals, various coping strategies are devised and acted upon.

Analyzing the appraisal process is a crucial element in understanding coping strategies individuals use in times of stress. Background variables such as socioeconomic factors, alcohol/drug use, and prior physical/mental illnesses may affect patients' appraisals of stressful events. For that reason, a variety of background variables were explored. It was found that nine subjects had a history of alcohol or drug abuse. Twenty-six subjects experienced either chronic problems related to work and/or marriage or an acute life crisis prior to their accidents. Twenty-three subjects came from lower-middle-class backgrounds. Ten subjects were categorized as middle-class. The causes

of their injuries ranged from cooking accidents to major industrial accidents.

Each of these background variables was found to affect the individual's appraisal process. The appraisal process was explored by asking subjects to describe their typical activities. They also were asked to describe how they felt about current daily routines and post-burn problems. All subjects experienced similar problems or role strains as a result of their injuries. Role strains are the hardships, challenges, and problems that people confront as they engage in their social roles. In this study, burn victims faced many hardships as a result of their injuries. Employment opportunities, marital relationships, and recreational activities were adversely affected. These problems and role strains were potential threats to the subjects' feelings about themselves.

Coping behavior is an attempt to mollify threatening aspects of a stressful situation. Lazarus and Folkman (1984) noted that coping is always a contextual process and is influenced by a person's appraisal of the situation. Once an individual defines the causes and meaning of the stressful situation, he or she attempts to cope with the stressful event. Coping has two distinct functions: the regulation of emotions or distress (emotion-focused coping) and the management of the problem that is causing the distress (problem-focused coping). In this study, subjects' coping strategies were explored by analyzing interview data and nonverbal cues in evidence during the interviews. The burn victims interviewed used problem-focused and emotion-focused strategies.

Domain analysis is the first step in analyzing ethnographic data. In the process of this analysis, domains or categories were formed and

then organized into five taxonomies. Taxonomies represent the relationship or organization among the domains. The first taxonomy was named reliving the accident and hospitalization. Subjects' statements about their accidents and the experience of hospitalization were categorized in this taxonomy. The following domains were contained in the accident/hospital taxonomy: reasons for the injuries, descriptions of the accidents, and descriptions of the hospitalizations. The second taxonomy was called past lives and contained information about the burn victims' lives prior to their accidents. This taxonomy included the following domains: problems occurring immediately before the accident; chronic, long-standing problems; and alcohol/drug problems. The third taxonomy was called role strains. This taxonomy contained four domains addressing the role strains the patients experienced as a result of their injuries. The four domains were physical alterations, alterations in social roles and activities, financial changes, and emotional changes. In response to these role strains, subjects used many different coping strategies. The fourth taxonomy was called the coping process and contained six domains. These domains were social comparisons, avoidance behaviors, supportive relationships, relationships with health-care professionals, alterations in values and priorities, and active problem-solving attempts. Subjects' lifestyle changes and adaptational outcomes were addressed in the last taxonomy. All of the subjects had to reorganize or change their lifestyles and activities. These changes were reflected in the following domains: return to work, resumption of recreational activities, resumption of personal relationships, and pride related to surviving the injury. A componential analysis also was conducted. In this type of analysis a

search for attributes associated with the domains is conducted. A componential analysis revealed that the subjects' responses to their injuries differed depending on their social class backgrounds.

#### Chapter Organization

This chapter is organized into five sections. The patients' hospitalizations are addressed in the first section. All of the subjects discussed their accidents and burn-unit experiences. Because of the open-ended nature of the interview questions, subjects had a great deal of control over the time they devoted to any given topic. Some subjects discussed their accidents and hospitalization in 30 minutes, while other took an hour and 25 minutes. Subjects with larger burns (greater than 40% TBSA) spent more time talking about their hospitalization than subjects with smaller injuries.

The patients experienced many problems prior to their accidents. This topic is addressed in the second section of the chapter. Fifteen subjects had chronic work and/or marital difficulties before their burn injuries. Eleven subjects experienced job or marital problems immediately prior to their accidents. Seven reported that they did not have any significant acute or chronic problems before their accidents occurred.

The role strains the subjects experienced as a result of their injuries are addressed in the third section of the chapter. All subjects experienced threats related to body image and comfort, threats to the fulfillment of customary social roles and activities, threats to emotional stability, and alterations in future plans. Some subjects experienced severe financial hardship. Subjects discussed their feelings about each of these problems and the role strains they experienced.

The fourth section of the chapter contains information related to the strategies subjects used to cope with the changes that had occurred in their lives. Subjects used many different coping strategies. Some coping strategies were used by all of the subjects. Other coping behaviors varied depending upon the subjects' social class backgrounds. Subjects' adaptational outcomes are addressed in the last section before the summary.

Data from the taxonomies were used for support and illustrations within each of the sections described above. Due to space limitations, not all of the examples of the subjects' appraisals and coping processes found in the data were included in this chapter. The author chose those examples that best illustrated the burn victim's appraisal and coping strategies and took care not to overlook disconfirming data. Some subjects did not experience the same problems or use the same coping strategies as other burn victims. These subjects used coping strategies that were atypical and these cases will be described at the end of each of the five sections.

#### Reliving the Accident and Hospitalization

Information relative to the accident and hospitalization taxonomy are presented first for two reasons. First, subjects spent more time discussing their accidents and hospital experiences than they spent on any other topic. Second, the reliving of the accident and hospitalization orients the reader to the horrors of the accident itself and of the subsequent hospitalization. It is important to understand the sudden, severe nature of burn injuries and the painful treatments necessary for recovery. An understanding of these two issues will enhance the reader's understanding of the numerous problems created by burn injuries.

Some subjects are injured at work as a result of carelessness and/or poor working conditions. Others are injured as the result of house fires. Many house fires occur because of unsafe conditions such as poor electrical wiring. Car accidents, boating accidents, and camp fires are other common causes of burn injuries. In these instances, accidents are more likely to occur when the victims are intoxicated. Regardless of the cause, burn victims are suddenly faced with a long, painful hospitalization. Upon discharge from the hospital, they must confront the fact that their lives are forever changed. It is not surprising that each of the subjects in this study asked "Why me?"

Each subject gave a detailed description of his or her injury and hospitalization. These descriptions included memories of painful treatments and memories of other burn victims they met or observed in the hospital. During interviews, subjects attempted to explain why they had been burned. It was clear that the "why me" topic was one that each victim had thought about at length since their burn accidents. The attempt to identify meaning in the burn experience took two forms. First, all of the subjects provided some explanation for why the accident occurred. Second, the subjects described new attitudes and priorities that guided their post-burn lives. The following quotations are illustrative:

I don't know why this happened. I try to think of reasons why, I don't know. Sometimes I think it was because I was bad or did something bad.

Since this thing happened to me, I take it one day at a time. I don't look back and I sure as hell don't look ahead. I take each day as it comes.

As previously mentioned, subjects spent 30 to 85 minutes during their interviews discussing their accidents and burn unit experiences. All subjects with burns greater than 40% TBSA talked about their

hospitalizations for an hour or longer. Subjects with smaller burns spent less than an hour on this topic. Considering the sudden, severe nature of burn injuries and the pain experienced during hospitalization, it is not surprising that subjects focused on this issue. A description of the burn unit will be presented first, followed by a description of the subjects' experiences with pain. The subjects' memories of other burn victims also will be presented. Description of their accidents will be presented last. As the subjects described their accidents, they attempted to identify reasons for their tragedies.

#### The Burn Unit Experience

The Burn Intensive Care Unit, Shands Hospital, University of Florida, where all subjects were treated, was a large room located off a corridor away from the main hospital building. All non-patients in the unit were required to wear gowns, caps, masks, gloves, and shoe covers. Burn care is highly sterile, technical and complex. Patients were placed in one of six beds in this large room. Numerous machines, including ventilators and cardiac monitors, were located in the unit. Each machine makes its own unique sound and was equipped with alarms to warn the nurse of malfunctions. Patients could not help but see and hear their fellow patients.

The subjects were abruptly thrust into this strange hospital setting, surrounded by unhappy patients and noisy machines. They underwent lengthy and painful dressing changes, sometimes as frequently as four times a day. All subjects discussed the pain they experienced during their hospitalization.

Understanding the expectations of the nursing staff and a burn unit regimen can add to the understanding of the subject's pain-related behaviors. Typically, burn victims experience intense pain. Not only

do they have pain because of their burns, but they must undergo whirlpool treatments where nurses use scalpels and tweezers to pull away necrotic tissue. Fresh dressings are applied after each whirlpool treatment. Some topical medications applied to the burned areas cause severe pain. One patient commented that the "ointment" that was used made it feel as if "[I were] being set on fire again." Physical therapy and repeated surgeries also contribute to the pain.

The pain associated with a burn is severe and medication cannot remove all of the agony. Endurance of pain becomes crucial in the burn unit. Patients receive medication to minimize their discomfort. However, the patients must not receive too much analgesia or they will become drowsy and uncooperative during treatments. The staff in a burn unit works with patients to help them control their pain-related behaviors. A certain amount of moaning and yelling is accepted by a burn unit staff. The staff will intervene when patients complain too loudly because it is felt "pain expression" has a demoralizing effect on the other patients and the nurses. As one nurse explained, "If they (patients) lie there screaming, it interferes with their care. They won't let the nursing staff do what needs to be done. The nurses get angry and upset and the other patients get really scared. We can't allow that."

As they discussed their hospital experiences, 15 of the 23 lower-middle-class subjects boasted about their high pain tolerances. These subjects had burn injuries ranging from 10% TBSA to 95% TBSA. There did not seem to be any relationship between their descriptions of pain and the size of the burn area. Joe, a 43-year-old male, sustained a 25% TBSA injury when a resin tank exploded. He stated that he was able

to endure "pain like nobody else because I've got a well trained mind. I took things in that place [burn unit] nobody could take." Tracy, a 30-year-old lower-middle-class female injured in a plane crash, had a 35% TBSA injury involving her face, anterior chest, and left arm. There was extensive scarring around her mouth and eyes. She commented:

When they first started doing dressing changes, I got really scared. The nurses would come at me with those tweezers and pick at me. But they yelled at me for fighting them. I really took a lot of pain. I must be stronger than I thought. Now when I have pain I just ignore it or take Tylenol.

In contrast, middle-class subjects seldom discussed how much pain they tolerated during their hospitalization. Rather, they talked about the strategies they learned to cope with the pain. Bryce, a 40-year-old middle-class male, told an unusual story regarding his experiences with dressing changes in the burn unit. He was injured when some cans of gasoline exploded in his garage and had a 47% TBSA injury to his chest, both arms, and both thighs. Because of his strange experience, he learned a variety of techniques to control his pain.

There was another woman in the burn unit at the same time I was there. She was hurt pretty bad. I never could see her because they kept the curtain pulled between us. At first I really used to yell during the dressing changes. There's no way to tell you what they [the dressings] felt like. [The nurses would] let the dressings harden onto the burn and pull it off dry. I've never been through anything like it. I used to wonder why the lady in the next bed never cried. So I decided I'd be tough too. I started to meditate and think about places I'd like to be. Or I'd ask the nurses to play the radio and I'd concentrate hard on every word in the song. I finally got to where I went through dressing changes pretty quietly by distracting myself. Then I found out that the nurses never told me the lady in the next bed had a tube down her throat and couldn't talk. That's why I never heard her screaming, and for weeks the nurses never told me. They let me think I was some kind of trouble-maker for yelling.

Eight of the 10 middle-class subjects reported that their most vivid memories of the burn unit involved other patients. Four of the

23, lower-middle-class subjects mentioned the other patients. The lower-middle-class subjects who talked about other burn victims had 35% TBSA burns or less. There was no relationship between burn size and talking about other patients for the middle-class subjects.

Peggy was a 35-year-old middle-class housewife who sustained a 50% TBSA injury in a car accident. She was burned on the face, anterior chest and abdomen, and both arms. Peggy had small patches of scar tissue on her jaw line. The left side of her jaw was more severely scarred than the right side.

I didn't know how bad I was at first. I don't even remember very much about how it all happened. I remember waking up with this tube down my throat, and my arms tied down to the sides of the bed. And I remember being really scared because I could hear people screaming. They had this baby in there too. The poor thing would cry and cry. At first I worried more about them [the patients] than I did about me. I thought it was so horrible for them. Then I got scared because I knew they [nurses] were changing dressings when the patients would start yelling. I knew I was going to be next.

Peggy remembered the other patients and their suffering. However, her concern for the other patients rapidly turned to fear and apprehension. Peggy quickly learned that certain patient behaviors signaled an impending dressing change.

Janice was a 30-year-old artist who was injured when her fondue pot exploded. She was burned across the anterior chest and right upper arm. She also was sprayed in the face with hot steam. When she was first admitted to the burn unit, her eyes were swollen shut and she could not see. During the interview, she wore a long-sleeve shirt buttoned to her neck so that none of her scars were visible.

When I was first in the burn unit, I couldn't really see. Since I'm an artist, I like to visualize everything. So I would lay in bed and visualize the people in pain. I could barely see them. But I remember a young man with no legs and he'd cry all the time.

There's no privacy. People are horribly messed up and laying there for all to see. They die there.

Patients are admitted to a burn unit within several hours after their injuries. They remain in the burn unit until a few days before they are scheduled to go home. After the initial, acute phase of their treatment is over, the patients have long periods of time to think about what happened to them. All of the subjects talked about their struggles to find a reason for their mutilating injuries. The subjects reported that they frequently thought about their accidents during their hospitalization.

#### Descriptions of the Burn Accidents

The lower-middle-class subjects offered negative and fatalistic descriptions of their accidents. Eighteen of the lower-middle-class subjects believed that God had willed their injuries. The following quotation is a typical of the injury explanations given by these 18 subjects:

This happened because God wanted it to. I've asked so many times, "Why am I alive?" God wanted me to be here to suffer. That's all.

Virginia, a 67-year-old woman, sustained a 25% TBSA injury in a house fire. She was burned on the back of the neck, shoulders, and left arm. Her husband died in the fire. She believed that her husband's demise was God's will:

It started right here in this room. We used to use this as a TV room. As a matter of fact, my husband died right where you're sitting. It happened in January of '85. Henry was so hard to live with, he scratched and itched and scratched and itched (because of psoriasis). God was ready for Henry to go. He died from smoke inhalation. He was an alcoholic too. He was filthy and wouldn't stay clean. Henry started the fire with his cigarettes. The night of the fire we had fallen asleep in the TV room and I woke up and told him the house was on fire. And he sort of woke up and said to me "The Hell you say." That was his favorite expression, "The Hell you say." So I left him and ran out of the house. It was God's will to leave Henry behind.

The middle-class subjects attributed their accidents to situational factors, as opposed to God's will or fate. Timothy was a 22-year-old chemistry major who sustained a flash burn to his hands and lower extremities after mixing chemicals in a laboratory. He discussed his accident calmly:

It was just a mistake with the chemicals. Maybe I should have anticipated that it would happen. But I've learned that I have to be more careful in the future. I only had an 18% burn so things weren't really too difficult for me. I had some skin grafting on my thighs, that's all. I'm sure other people can really have more serious problems than I did. I'll just be more careful.

Janice, the 30-year-old woman who sustained a 25% TBSA burn across her chest and arm in a cooking accident, attributed her accident to carelessness:

I was cooking cheese dip in a double boiler. Well, I didn't have one, so I put two pots together. I noticed it was making a funny noise and when I went to look at it, it exploded. I'm just glad that I'm able to see and I'm glad my face isn't scarred. I'm fortunate that I didn't scar where I was visible. I won't ever use a double boiler again. Sometimes I have a bad sense of guilt. I feel people shouldn't worry about me when others are burned so badly.

Timothy's and Sandra's responses were typical for the middle-class subjects. They attributed their accidents to carelessness and/or situational factors and resolved to be more cautious in the future.

Only 5 of the 25 lower-middle-class subjects believed that their accidents were due to their own carelessness. All 5 had less than 45% TBSA injuries. Three of the lower-middle-class subjects who believed that they were burned because of God also blamed other people for their injuries.

According to Taylor (1983), accident victims search for meaning in the traumatic event in an attempt to gain control over the incident.

Lazarus and Folkman (1984) noted that a subject's sense of control in at specific context has a serious effect on the coping strategies he or she employs. To further explain this point, Lazarus and Folkman drew on Bandura's (1977) work on efficacy expectancies. According to Bandura "people fear and tend to avoid threatening situations they believe exceed their coping skills, whereas they get involved in activities and behaviors assuredly when they judge themselves capable of handling situations that would otherwise be intimidating" (p. 194). Efficacy expectancies, or the belief that one can succeed, affect an individual's willingness to persist in the face of obstacles and aversive experiences.

A sense of control over an accidental event may enhance a victim's feelings of self-esteem (Taylor, 1983). During hospitalization, burn victims face numerous and painful treatments and equally painful surgeries. The resulting disfigurement threatens the patient's self-esteem. Not only is the victim permanently scarred, but he or she is confronted with changes in social roles, financial hardships, and possibly years of reconstructive surgery. These role strains can become overwhelming.

Every subject in this study experienced role strains as a result of his or her injuries. Subjects with the fewest financial resources experienced the greatest number of role strains. Bernstein (1976) has noted that fires are an index of social class. The poor and individuals from lower-middle-class and working-class backgrounds are most likely to suffer burn injuries. In the present study, lower-middle-class subjects experienced many problems or role strains related to their burn injuries. Middle-class subjects also faced problems. But, the problems

were fewer in number and less severe than those encountered by the lower-middle-class subjects. It is important to note that the lower-middle-class subjects had larger burn injuries than the middle-class subjects. The more severe the burn, the more problems the individual is likely to encounter.

For the lower-middle-class subjects, role strains associated with the burn injury were superimposed on other pre-existing and chronic problems. During interviews, patients discussed what their lives had been like before they were hurt. Many had difficult and troubled lives prior to their burn injuries. Bernstein (1976) noted that many burn victims come from "lower social classes where self-esteem is precarious" (p. 45). The lower-middle-class subjects had chronic job and/or marital problems. In addition to their pre-existing problems, they had to face the physical and emotional insults associated with their burn injuries. Some of the problems that the burn victims encountered before their accidents occurred are addressed in the next section.

#### Past Lives

Fifteen of the 33 burn victims had long-standing marital and/or job related problems. Eleven reported that they had several, serious problems arise a few weeks prior to their accidents. These subjects stated that the problems had been resolved within a short period of time. Seven subjects reported that they had very few problems prior to their accidents. Two of these seven subjects stated that the burn injury was the first serious problem that they had ever faced. Nine subjects had a history of alcohol and/or drug abuse.

In total, 26 of the 33 subjects had either acute or chronic problems before they were injured. The role of stress in the etiology,

exacerbation, and maintenance of physical illness is well documented (Fuerstein, Lobbe, & Kuczmierczyk, 1986). Noyes, Frye, Slymer, and Canter (1979) reported that approximately one-half of 67 adults admitted to a burn unit in a year had a pre-existing physical and/or psychiatric condition that increased their susceptibility to injury. A significant increase in stressful life events was reported by these patients in the year prior to the accident. Noyes et al. (1979) found an inverse correlation between social class and stressful life events. In this study, 21 of the 26 subjects who had acute or chronic problems came from lower-middle-class backgrounds.

It was against a backdrop of stressful events and hardships that 26 subjects in this study faced what has been called the most devastating horror that could ever be inflicted on a human being: a burn. The lower-middle-class subjects spoke bitterly about the problems that they encountered before they were injured.

Michael, a 30-year-old male, sustained a 33% TBSA injury while on a camping trip. He was not sure exactly how the accident occurred. Michael's memory lapses were apparently due to a long history of drug and alcohol abuse. In discussing his life before the burn injury Michael noted,

Things never worked out right. I started school to be an electrician about two years ago back in Louisville, but I never got the diploma. I done almost everything. My wife and I were fern trimmers at this last place. I wanna go back to school but I don't know. Nothings worked out right so far. I just take it one day at a time.

Thomas, a 25-year-old, was injured when 500-degree tar was poured over his right hand. He reported that he had stopped drinking three or four years before his injury. He was taking two to three tablets of valium daily for "nerves." He began taking the valium after he was

discharged from the burn unit. He discussed his work in the same fatalistic tone as Michael.

I've been tarring roofs since I was fourteen years old. That's all I ever done. It gets to ya after a while. I didn't know what to do about it (the job). Just stay there and take it, I reckon.

The 21 lower-middle-class subjects with acute and chronic problems had few resources available to them as they confronted difficulties that permeated their lives. They had to face numerous and long-term problems created by the burn injury. At the same time, they had to cope with pre-existing stresses. The problems associated with a burn injury are grave and permanent. As one patient said, "A burn is something you never overcome." This statement was echoed by others:

The mental pain never goes away because you're different. You're never the same again.

I just take things day by day. Things are a lot better than I thought they'd be at first. But I've been told I've reached my maximum medical you know. So this is it. Things are never going to change from here on out.

I'd like to think things would be better. But I reckon that I just better sit back and take it, cause this is the way it's always gonna be.

Five middle-class subjects experienced some disruption and turmoil in their lives prior to their injuries. Their problems were short-lived. John, a 32-year-old computer programmer, sustained an 18% TBSA burn when his clothes dryer caught on fire.

I wasn't being careful and I had some oily rags near the dryer and the rags and the dryer caught on fire. I wasn't paying attention to what I was doing. I had a million things on my mind. Well, this is awkward. My first wife was a real class act. She was seeing someone else and I found out about it just before I got burned. Then, while I was in the hospital, she became pregnant with this other guy's baby. We would have gotten the divorce even if I hadn't gotten burned. Since I married Cindy, things have been great.

The remaining four middle-class subjects who experienced work and/or marital problems before their accidents reported that their problems were serious but temporary.

All of the subjects discussed the changes in their lives created by their burn injuries. Each subject faced a variety of problems or role strains. As previously mentioned, the appraisal process was explored by asking subjects to describe their daily activities. They also were asked how they felt about their activities. As they discussed their daily routines, many problems or role strains emerged. The role strains created by the burn injury are addressed in the next section. Four distinct kinds of role strains will be discussed. They are physical alterations, alterations in social roles and activities, financial changes, and emotional changes.

### Role Strains

#### Overview

According to Pearlin (1983), role strains represent a constant threat to an individual's sense of mastery and self-esteem. Self-esteem is intimately tied to psychological well-being (Brown & Harris, 1978; Kaplan, 1980; Thoits, 1985). The ability to successfully engage in usual social roles and activities is central to a sense of mastery (Pearlin, 1983) and self-esteem (Bandura, 1977). According to Thoits (1985), failure to successfully perform social roles leads to feelings of frustration, anxiety, hopelessness, and shame. In this study, burn victims faced multiple threats to their social roles. Employment opportunities, marital relationships, and recreational activities were adversely affected by their burn injuries. However, some subjects experienced more acute and numerous role strains than others. Some

subjects faced problems that were resolved during the first 6 to 12 months after their injuries. Others subjects experienced permanent alterations in their lives. The problems and role strains burn victims faced as they learned a new way of life are addressed in the following sections.

### Physical Alterations

Patients spent a major portion of their interviews discussing health changes since the burn. The four physical problems subjects discussed were fatigue, skin changes, chronic health problems, and chronic pain. These four problems were severe enough to prevent some subjects from resuming the employment and recreational activities that they pursued before they were burned. Thus these physical changes represented a role strain.

The most common complaint was fatigue. Seventeen of the 23 lower-middle-class subjects with TBSA burns ranging from 10% to 85% stated that they never overcame fatigue. Only 1 of the middle-class subjects, a male with a 63% TBSA burn, reported chronic fatigue. Fifteen of the 33 subjects reported that they began to feel energetic within the first year after the injury. Eleven of these 15 subjects had TBSA burns of 40% or less. It is probable that their higher energy levels were related to their less severe injuries. However, 3 middle-class subjects with large burn injuries ranging from 47% to 62% TBSA did not experience excessive fatigue. One of these subjects reported that he was unwilling to "give into the burn." He exercised daily and overcame his feelings of tiredness. The other 2 middle-class subjects who did not have problems with fatigue also exercised daily.

The 17 lower-middle-class subjects who complained about fatigue stated that it was such a serious problem that it disrupted their daily activities. For example, George, a 53-year-old who sustained an 85% TBSA hot asphalt burn, said:

I can't do anything. I'm pretty much confined to the house. I go with my wife once in a while but usually I'm too tired to do anything.

Similar statements were made by the other 17 lower-middle-class subjects who had problems with fatigue. Regardless of the size of their injuries, these subjects stated that they had to give up many activities. Eight of the 17 subjects were disabled as a result of their injuries. Five subjects required a change in employment. The remaining 4 subjects returned to their old jobs, however, they reported that they were too tired to resume former recreational activities.

Seventeen of 23 lower-middle-class subjects experienced fatigue that seriously affected their recreational and employment opportunities. In contrast, only 1 of the 10 middle-class subjects complained about chronic fatigue. The rest of the middle-class subjects reported that their energy levels returned to normal within six months after the injury. Six of these subjects had burns that were less than 30% TBSA. Two subjects had injuries ranging from 40% to 50% TBSA. One middle-class subject who had no problems with fatigue, had a 62% TBSA burn.

Alex was a 40-year-old businessman who sustained a 62% TBSA burn when his car was hit from behind and exploded. Alex was burned over most of his body, except his face, hands, and forearms. He stated:

I wanted to get back on my feet and return to work. I was a little tired at first, but I wasn't going to give into the burn. I knew

if I exercised and worked hard enough I could overcome this thing. And I did it. It's all in having the right frame of mind.

The idea of "overcoming" burn-related problems was repeated by 9 of the 10 middle-class subjects. All 9 subjects began exercise programs within days or weeks after leaving the burn unit. They worked hard so that they could resume their pre-burn activities. Lipowski (1970-1971) noted that individuals who view illness as an obstacle to be overcome tend to engage in a wide variety of activities. In contrast, those who view illness as an overwhelming threat tend to become passive and limit their activities.

Richard was the only middle-class subject who reported that he was chronically tired. He was a 35-year-old accountant who sustained a 62% TBSA injury when his van exploded. Richard had full thickness neck and hand burns. Large bands of scar tissue formed on Richard's neck, causing his chin to be pulled toward his chest. Several reconstructive procedures had been done but these were only partially effective. Richard's head remained tilted toward his chest and he had to roll his eyes upward to see objects in front of him. Richard commented:

I can't do much anymore. About all I can do is go to work. I'm so tired when I get home, I just collapse into bed. I try and sit at work as much as possible. It's been five years since I was burned and I suppose things have improved, but I still tire out pretty quickly.

Richard's feelings of fatigue were very different from those of other middle-class subjects. Alex had almost the same TBSA injury as Richard (63% versus 62%). Despite the size of his injury, Alex resumed all of his prior recreational and employment activities. A variety of factors could have contributed to the differing responses of these two subjects. For example, researchers were investigating the effects of

different personality variables on the appraisal and coping process (Scheirer, Weintraub, & Carver, 1986). The location of the burns also may have been an important variable that led to Richard's negative appraisal of his activity level. These two aspects were not explored in this study.

Five of the 6 lower-middle-class subjects who did not have problems with fatigue had TBSA injuries of 45% or less. There was one exception. Julie was a 30-year-old who sustained a 95% TBSA burn as a result of a plane crash. The only part of her body that was not burned was her scalp. Both hands were partially amputated and she was extremely disfigured. Large bands of hypertrophic scar tissue covered her body. Julie bred, groomed, and trained dogs. When questioned about her activity level she replied:

I've heard many burned people complain about being tired all the time. They're not really tired. It's a habit. I'd be home alone all day with nothing to do so, I'd lay down and nap. Well, it turned into a habit, so every afternoon at two o'clock I thought I was tired so I took a nap. Finally, I said, "This is crazy, you can't sleep all the time." So I made myself stay awake and busy with the animals.

Fatigue was not the only physical alteration that confronted the burn victims. All of the subjects complained about changes in their skin. Skin that heals over burns is fragile. Most burn victims have large areas of healed skin grafts and donor sites. Donor sites are areas where superficial layers of skin are removed for use on burned areas. When the skin is laid down over the burned area, it adheres and allows for recovery. Both the grafted areas and the donor sites are prone to tissue breakdown and bleeding. Subjects' complaints about their skin were related to the size of their injuries. Individuals with larger burns had more severe skin problems than those with smaller

injuries. Julie, the young woman with the 95% TBSA burn, faced enormous difficulties with her skin for four years.

My hands hurt all of the time. You know, I'll bump into things and my skin will scrape off. I just pick up the skin and stick it back on. I don't have any feeling someplaces. So, sometimes I'll see dripping blood and I'll know I knocked some skin off. I really take good care of my skin. [Reaches down and rolls up her pant leg.] Here, touch my skin. See how smooth it feels. I keep lotion and baby oil on it all the time. I rub my skin a lot to keep it from feeling tight. I really try to take care of myself.

Because Julie's skin was so fragile, she had to be careful not to bump into things. She also required assistance from her sister and brother-in-law. For example, her sister had to bathe Julie's dogs for her because the soap was too harsh for Julie's skin. Julie commented that she "resented" having to ask her family for help. She wanted to manage her dog grooming business independently. However, her severe skin problems prevented her from independently performing her job.

All of the subjects had to change their activities because of their skin problems. Sixteen subjects reported that they had to be more cautious at work to avoid damaging their skin. All of the subjects had to wear protective clothing when they were outside. Burn victims are not able to be in direct sunlight. Ten subjects had to give up going to the beach, fishing, or boating. Altering work habits and giving up recreational activities was a source of stress for the subjects. Because of their skin changes, all of the subjects had to alter some of their social roles. According to Thoits (1985) the inability to engage in customary social roles and activities threatens psychological well-being.

Skin care was stressful to the subjects for two other reasons. First, skin care is expensive. Second, treatments designed to promote

healing and decrease scarring are time-consuming and often painful.

Clinton was a 50-year-old male who was injured over 80% of his body when an explosion occurred at the shingle factory where he worked. Four years after the injury occurred, he still had open wounds.

See my heels? I put shoes on and they'd bleed and get raw. A lot more raw than now. I have to keep bandages on 'em all the time. I had to have special shoes made too. They cost me four hundred dollars. They helped stop some of the bleeding. But I still need bandages on.

Clinton reported that he was upset by the cost of the shoes. He had to file claims with his insurance company and wait several weeks for a payment. Clinton called the insurance agents "the people over yonder." He stated he was "afraid" of the insurance agents and "hated" to talk to them.

All of the subjects were told by their doctors to wear Jobst garments for 12 to 18 months after their injuries. Jobst garments are designed to exert pressure on the burned areas to reduce the amount of scarring. The garments must be worn 23 hours a day to achieve the best cosmetic results. While the Jobst garments do not prevent scar tissue formation, they do lead to an improved appearance by flattening the scar. These garments are expensive and uncomfortable.

Virginia was the 67-year-old woman who was burned in a house fire.

I was supposed to wear Jobst but I couldn't stand it. It was summer and those things are so heavy. I couldn't stand the heat. It made me so uncomfortable with those things on.

Julie, the young woman with the 95% TBSA burn, stated that the only time she cried after leaving the burn unit was when she wore the Jobst garments. Only 1 of the 10 women in this study wore her Jobst garments as prescribed. Catherine, an attractive 28-year-old woman, was injured when a bomb exploded outside of her boyfriend's apartment. Catherine continued to wear the garments five years after her injury. She offered the following explanation for wearing them for so long:

Well, sometimes my legs hurt and swell so I like to wear the Jobst. It helps with those kinds of problems. You can't see through Jobst. And I don't like to have people look at my legs if I can help it. At least with the Jobst you can't tell what's underneath.

Catherine was willing to endure the discomfort associated with the Jobst garments because they hid her scars. All the other subjects complained about pain and heat intolerance when wearing the garments.

After discussing their problems with fatigue and skin care, 16 subjects reported that they had developed various burn-related health problems. Ten of the subjects sustained inhalation injuries that resulted in residual pulmonary defects. Complaints of shortness of breath were common. Other patients complained about hypertension, ulcers, and bladder infections. These conditions required periodic medical evaluation, representing an expense for the subjects. The subjects reported that these physical changes impaired their ability to resume all of their pre-burn activities. One 30-year-old male subject developed infertility related to the burn trauma. He required treatment at an outpatient fertility clinic for approximately two years. He noted that this problem threatened his marriage. One subject reported permanent hearing loss and disequilibrium problems secondary to months of antibiotic therapy. Three women reported that they were encouraged to eat so much in the burn unit that they were 10 to 20 pounds over their ideal body weights. All of these conditions developed subsequent to the burn injury and were stressful for the subjects.

Chronic pain was the most difficult physical problem facing the burn victims. Seventeen subjects reported that they had problems with chronic pain. With one exception, these subjects had 35% TBSA burns or greater. The pain interfered with the subjects' abilities to perform

their usual daily activities. Jay was a 59-year-old male who was injured over 70% of his body when a fire occurred at a chemical plant. During the interview he commented that severe pain was now part of his life:

I'm in pain all the time. It never goes away. It's not as bad as when I was in the burn unit. But it's there and never quits. It's so bad some days that I just sit and cry. Other days I have Mary rub my legs and feet to try and stop the aching.

Julie, the woman with the 95% TBSA, also experienced constant pain:

I live with pain all the time. My hands hurt constantly. I live with it. Physically I've always been strong. I can take it.

Sixteen of the 17 subjects who complained about chronic pain came from lower-middle-class backgrounds. With one exception, these subjects had large burns. Thomas, the young man with a 10% hand burn, complained of constant, severe pain. Richard was the only middle-class subject who experienced chronic pain. Richard was the man who was injured over 62% of his body when his van exploded. The remaining subjects in this study did not have problems with pain after their burn wounds healed.

The fatigue, pain, fragile and scarred skin, and other health problems prevented many of the subjects from resuming their former social roles and activities. The physical alterations created numerous problems for some of the burn victims. Their social roles were disrupted and financial hardship ensued. Pearlin (1983) defined role strains as hardships, conflicts, and problems that people experience over time. In this study, physical alterations, altered social roles and activities, and financial hardships were role strains for the subjects. According to Pearlin:

There are two aspects of self that become particularly vulnerable to injury by the persistence and intractability of role strains:

mastery and self-esteem. Quite clearly, adversity that becomes a fixture of life can come to implicate these dimensions of self. The results of our analysis have shown empirically that chronic strains have an erosive effect on mastery and self-esteem.  
(p. 27)

The burn victims' changes in social roles and financial alterations are described in the following sections.

#### Alterations in Social Roles and Activities

Changes in social roles and activities were pronounced for the lower-middle-class subjects. In the lower-middle-class group, eight subjects had not returned to work. Five of the lower-middle-class subjects underwent a job change after their burn injuries. The subjects who had alterations in job related activities also experienced disruptions in recreational activities and personal relationships. Ten of the lower-middle-class subjects resumed all of their pre-burn activities. All ten of these subjects had less than 35% TBSA burns. The lower-middle-class subjects who were not able to resume some or all of their former activities had TBSA injuries ranging from 10% to 95%.

In total, 14 of the 23 lower-middle-class subjects described job changes and altered relationships with family and friends. Joe was a 43-year-old male who sustained a 25% burn to his head, neck, right hand, and right arm when a resin tank exploded. He reported major changes in his daily activities since his accident:

I can't do anything at all. I only leave the house to go to work. I was a maintenance man. Now I'm indoors in purchasing. I went back to work one month after I got out of the hospital. But that was a real joke, you know. I sat there at the desk until they found something for me. It was one month for the physical pain to be over. You know, it never ends mentally. So, I go to work but nobody really needs me there. There's a big difference in my salary. I don't get any pay raises. I'm always passed over for that. It's not the job I'm doing. It's the people. I should have

been a supervisor, but they pass me over for promotions too. But I guess no one is to blame. I'm absent at least 6 to 10 days a month. And if I'm tired and I want to go home, I go. But they haven't fired me yet.

I always liked to be outdoors. I was in the Army for 22 years, always outdoors. I never sat at some Goddamn desk wondering if I'd have to go stand in the unemployment line.

Prior to the accident, Joe and his wife were friends with some of their neighbors. After the injury, Joe reported that he did not want to resume his old friendships. He stated he only left the house to go to work and to have dinner at his mother-in-law's house.

Thomas, the young man who tarred roofs, also reported extreme changes in his life style following his injury:

Since my hand got burned I just sit around. I go here and there with my wife but I'm right-handed so I can't do nothing. I can dress myself and feed myself. But I can't write and my wife has to button my shirts. My wife quit her job when I got burned. She said I couldn't be alone with the kids because of the pain medication I was taking. She had to quit because I needed her. Generally my wife does it all.

I watch T.V. all the time and I mope around the house. I get out about twice a week. I used to get out to take my wife out to eat but I won't do that now because I know people stare at me. I think they laugh too. I go to my wife's grandma's twice a week to eat. It's so bad that my wife's daddy has a blood disease and he's probably not gonna make it. I won't even leave the house to see him.

It's been real hard on my wife. But I need her there. My 10-year-old boy won't do no sports. We used to do baseball and football, but the boy won't do it on his own. Mainly, I worry about him. The girl's place is just the girl's place. She's with her mama. That's the way it should be. The 3-year-old boy is scared of me and my hand. I try to explain to him, but it's no good.

Thomas' life changed in almost every way since his burn. His relationships with his wife and children were adversely affected. Both Thomas and his wife were unemployed. Thomas further reported that he saw no hope for his future. Unfortunately, Thomas' story was not unique.

The other subjects who experienced alterations in their social roles told stories that were similar to those of Joe and Thomas. They all described serious changes in their lives. In contrast, all of the middle-class subjects returned to work. Two of the 10 middle-class subjects had greater than 60% TBSA injuries.

Alex a 40-year-old business man who suffered a 63% TBSA injury, returned to work within six weeks after leaving the burn unit.

I couldn't wait to get back to work. All of those weeks laying in the burn unit got to me. I wanted to get back to my old routine. I began jogging after I got home from the hospital. I was home for about a week and I started walking outside. Then I began jogging up and down the driveway and kept working at it until I could go a mile. Then I started back to work, just a half a day at first. But in eight weeks I was there all day. I knew if I were going to get well I had to get right back into things.

Alex further reported that he was successful at work and had received a promotion during the past year. He did not think that the burn injury had hindered him in any way.

Richard, the 35-year-old man with the 62% TBSA injury, also returned to work. Richard reported that he did not want to see people at work because of his appearance. Richard's boss helped him by allowing him to work from 11:30 p.m. to 7:30 a.m. In this way, Richard resumed his former job but was not in public view. Richard reported that he wanted to work at night because he became fatigued with all of the daytime activity.

Yeah, I'm back doing exactly what I used to do before I was hurt. But I wanted to work at night. I don't want people staring at me. I just want peace and quiet to do my job.

Except for Richard, all of the middle-class subjects resumed their former recreational activities. Richard noted that prior to his accident he and his wife preferred to stay at home. He said they used

to go out to the mall or to the movies occasionally. After he had been burned, he avoided public places. Richard's major recreational activities centered around monthly family gatherings.

Richard was the only middle-class subject who was unable to conceal his burn scars with clothing. The issue of visible versus concealed deformities was not explored in this study. Richard had noted that before he was burned he liked to stay at home. Long-standing personality variables were not addressed in this study either.

There was one exception related to activity changes in the lower-middle-class group. Julie, the young woman with the 95% TBSA burn, resumed many of her former roles. Prior to her accident she had been promoted to the position of assistant loan officer at a small bank. One year after her accident, Julie entered a vocational rehabilitation program. The therapist tried to teach her to type with her deformed hands. As Julie described the training sessions, she laughed and held up her hands and said, "I can't type with these." All of Julie's fingers were amputated. A thumb remained on the left hand. Although Julie could not return to her former job, she was able to engage in a wider range of activities than other lower-middle-class subjects with large (greater than 40%) burns. Julie enjoyed talking about the things that she could do, despite her deformities:

I try to keep from being useless. I'm bullheaded. People tell me one thing and I'll go in the opposite direction. I breed dogs now. Mainly German Shepherds. I can sell the puppies before they're even bred. I'm on the phone for hours on end. I also watch Ashley [nephew]. I've watched him since he was born.

I do lots of things. I groom dogs. I also go to horse shows. I go to dog shows. I'm around the animal related public a lot. I like to talk to people on the phone before they meet me. If I've talked to people on the phone they may be set back when they first see me. But at least they know I have a normal mind. If people

see me and never talked to me before they think I'm some kind of retard. If I meet people face-to-face, I have to prove I'm not retarded.

We eat out once a week. If you want a home cooked meal, cook it yourself. I love to eat out. We bowl once in a while but the balls don't fit my hand, so it's hard [laughing].

The changes in job-related activities created financial problems for the subjects. All of the subjects had to address issues related to medical care expenses and insurance coverage. Financial changes are addressed in the next section.

### Financial Changes

None of the middle-class subjects experienced post-burn financial difficulties. All had health insurance that covered most of their medical expenses. In contrast, 18 of the 23 lower-middle-class subjects worried about money and/or insurance. Only 5 lower-middle-class subjects, all with less than 35% TBSA injuries, stated that they had no serious financial problems.

Three lower-middle-class subjects stated that negotiating with insurance companies was an impossible task. Clinton, the man who was injured in an explosion at a shingle factory was bewildered by insurance companies. He spent approximately 20 minutes during his interview discussing the special shoes he needed to prevent his feet from bleeding. Although the insurance company paid for the shoes, Clinton believed that the cost of the shoes represented a financial hardship.

Clinton: It really hurt the family when I had to have them \$400 shoes. They've helped me. But I didn't know what we'd do, having to buy them.

Researcher: I thought you said that you had insurance. Didn't the insurance pay for the shoes?

Clinton: Oh well, they did. I just worried about having \$400 shoes. It's hard to think about all of this. I never spent more than \$10 for shoes in my life.

Virginia, the woman who was injured in a house fire, was forced to retire. She also complained about her insurance company. However, Virginia was reimbursed for most of her medical expenses. Clinton and Virginia were ill-prepared to deal with the complexities of insurance reimbursement. Although their insurance companies paid most of their bills, Clinton and Virginia thought they had many financial worries.

Sixteen lower-middle-class subjects complained about financial problems related to changes in their jobs. The gentleman who was burned when a resin tank exploded believed that he was denied pay raises and promotions after his injury. Another gentleman sustained a 65% TBSA burn in a plane crash. Before his accident, he worked as a foreman in a foundry, but after his injury he had to accept a job as a school janitor. Sam expressed anger and bitterness over his change in employment and income. Terry, his wife, drove a truck for United Parcel Service. Her yearly income was significantly higher than her husband's. Sam was very concerned about their desperate incomes:

I had a decent job before I got hurt. And I made good money. But I couldn't keep up with it after I was burned. I had to take the job I got now. I work as a janitor at the high school. I guess you may have seen it in the paper. I sued the company who built the plane. It would've been a nice little windfall. The jury said there wasn't enough proof. What shit. So, now I gotta count on Terry. I'm not the kind of guy who believes my wife ought to be bringing the money home. I mean, it's OK for her to work, but I ought to be making the money, not her. She wants to have kids too. I want her home with the kid.

As Thoits (1985) noted, threats to self-esteem can lead to feelings of irritability, hopelessness, and depression. The financial and physical alterations combined with changes in social roles and

activities created feelings of anger and depression for some of the burn victims. Issues related to emotional changes will be addressed in the next section.

### Emotional Changes

All of the subjects experienced emotional changes after their injuries. These changes varied in intensity and duration depending upon the social class of the subject and the extent of the burn. During the initial post-burn period, the subjects experienced similar problems. All of the patients required dressing changings at home. They had to rely upon a caregiver to assist them with their medical care. They also needed assistance with some of their usual household activities. Initially all of the subjects needed to remain home from work.

The changes and/or loss of roles threatened some burn victim's feelings of self-esteem. These threats were manifested in hostile and depressed moods. All of the lower-middle-class subjects experienced feelings of hopelessness and depression after their accidents. Ten of the 23 lower-middle-class subjects reported that their problems with depression resolved within 12 to 18 months after leaving the burn unit. These 10 subjects had less than 35% TBSA injuries. Reports of uncontrollable weeping and nervousness were common among the rest of the lower-middle-class subjects. Ten of the subjects who reported problems with depression had burns ranging from 40% TBSA to 86% TBSA. Two subjects who were depressed had 22% and 10% TBSA injuries. Julie, the young woman with the 95% TBSA burn, denied having any problems with depression or irritability. However, Julie was angry and hostile throughout both of her interviews. The following quotes were typical

responses from the lower-middle-class subjects regarding the emotional changes they experienced:

I have a lot time just to sit and think. I try not to. But you can't help it. My nerves are jangled. Everything bothers me. Sometimes I cry, sometimes I just sit around and think this is it. It's not gonna be any better.

It's depressing. You know you reach a point where you know it's not going to be any better for the rest of your life. I'll say mean things to my wife. I'll apologize later. It's not her fault. I'll just break down and start crying. I've been to pain clinics, the doctors at [the hospital], it just don't help. The first few months at home I cried three, four times a day. Depression just set in. I didn't know what to think or expect. Now I just take it day by day.

Eight of the 10 middle-class subjects reported that feelings of sadness were resolved within the first few months to one year after the accident. Peggy was a 35-year-old female who sustained a 50% TBSA burn in a car accident.

I cried a lot at first. But I decided I had to go on. I have two beautiful children, a wonderful husband, and a nice home. I couldn't stay depressed forever. Sometimes I get upset and things are hard. But I really try and focus on the good things I have.

Two middle-class subjects experienced different emotional reactions to their injuries than the rest of the middle-class subjects. Richard continued to experience periods of depression seven years after his injury. He reported that he became depressed if he sat "around and thought too long." He also reported that he always felt "down, like nothing will ever be good or decent." In contrast, Mary said she did not experience any emotional changes after her injury. Mary was a 28-year-old woman who was burned when her car engine exploded. She sustained a 25% TBSA burn across her chest and forearms. Mary lived in a small, rural community. Her relatives owned and operated all of the major businesses in town, including the bank, the grocery store, the gas

station, and the beauty shop. She and her husband owned the hardware store. Mary returned to work two days after leaving the hospital. She reported that her husband and family needed her. She resumed her old routine immediately upon returning home. She stated, "If I didn't look in the mirror I'd never know anything was wrong."

A burn victim's hospitalization is usually lengthy and painful. The patient is suddenly thrust into a strange intensive care environment after a horrible accident. The patient's problems do not end with the hospitalization. After discharge from the hospital, a burn victim faces permanent changes in appearance and health. Social roles change and financial losses occur. The patient must give constant attention to his or her skin. Unlike many chronic physical illnesses, the burn victim's disability is visible.

According to Bernstein (1982), a physically disfigured person is often seen as deviant and handicapped. The disfigured person must cope with the loss of his or her former appearance. The individual is alive, but in a tragically altered form (Bernstein, 1978). Bernstein (1982) noted that rehabilitation is the management of social problems that have a medical focus. During the long period of rehabilitation, burn victims strive to accommodate the changes in their lives and to re-establish a sense of personal worth (Bowden et al., 1979). Lazarus and Folkman (1984) wrote:

The protection, preservation, and enhancement of mastery and self-esteem are inherently in the compelling interests of people. One does not suffer lightly threats to the self. Typically people strive to avoid or correct the circumstances that lie behind such threats. (p. 28)

Coping behavior is an attempt to preserve and protect feelings of self-esteem (Pearlin, 1983). The coping processes employed by burn victims are addressed in the next sections of the chapter.

## The Coping Process

### Overview

Lazarus and Folkman (1984) defined coping as "the person's constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing the person's resources" (p. 993). There are three important features to this definition. First, Lazarus and Folkman believed that coping is process oriented. Emphasis is placed on the person's thoughts and behaviors in a specific stressful encounter. Second, they viewed coping as contextual. This means that coping behavior is influenced by the person's appraisal of the situation. Third, they made no a priori assumptions about whether coping is good or bad. Coping is the person's efforts to handle a demanding situation whether or not those efforts are successful. This study focused on the appraisal and coping process within the context of a burn injury. The subjects' coping strategies will be presented in this section.

Lazarus and Folkman (1984) noted that coping has two distinct functions, the regulation of emotions or distress (emotion-focused coping) and the management of problems causing distress (problem-focused coping). Both forms of coping are used in most stressful encounters. In this study, the burn victims described coping behaviors that fell within the previously described categories. The subjects' responses also fit into the patterns described in the literature based on social class differences. Burn victims from middle-class backgrounds used more problem-focused coping strategies than the less affluent subjects. Their coping efforts were positive and optimistic. They actively planned their activities and set realistic goals. In contrast,

lower-middle-class subjects utilized more emotion- focused coping strategies. Withdrawal, avoidance, and demeaning other people were common behaviors. Some coping strategies were employed by all of the subjects. For example, all of the subjects had a supportive relationship with at least one other person.

The coping behaviors will be presented in the following sections: social comparisons, avoidance behaviors, supportive relationships, relationships with health-care professionals, alterations in values and priorities, and active problem-solving attempts. Within each section, the lower-middle-class patients' coping behaviors will be presented first, followed by the middle-class subjects' coping strategies. These sections will be followed by an overview of the subjects' outcomes and a chapter summary.

#### Social Comparisons

According to Lazarus and Folkman (1984), viewing oneself positively is an important aspect of coping. This kind of coping effort can restore self-esteem. Typically, the subjects listed their positive qualities as they discussed their injuries. They also discussed the fate of other burn victims. The subjects compared themselves to other patients on a variety of dimensions, including severity of the injury and social status. These social comparisons were directed toward enhancing self-esteem.

Although all of the subjects discussed individual traits and compared themselves to other burn victims, the type of comparisons varied for the middle-class and lower-middle-class subjects. The middle-class subjects mentioned their strengths in coping with their burn injuries. They expressed concern for other patients. Typically

the middle-class subjects remembered burn victims who were more seriously injured than themselves. The lower-middle-class subjects believed that they possessed an inner strength that enabled them to cope with their injuries. However, they frequently mentioned other burn victims in a derogatory manner.

Only 5 of the 23 lower-middle-class subjects expressed concern for other patients. The remaining 18 subjects made numerous disparaging remarks about other burn victims. Especially for lower-middle-class subjects with large TBSA burns (greater than 40%), comparing themselves to others was an important part of the coping process. This was one of the few ways that the severely burned individuals could avoid self-denigration and win self-esteem. George spoke with pride about his recovery. He said that he never expected to leave the burn unit with an 85% TBSA injury. He also talked about other burn victims:

You should have seen this burned kid at my family doctor's office. He was a mess and he whined all the time. I'm great compared to him. Really, you should've seen him. He was terrible.

Julie, the woman with the 95% TBSA burn, expressed annoyance towards patients she had seen in the burn clinic:

Like I said, I'm bullheaded. You tell me one thing and I'll go the opposite way. I've always been stubborn. I wasn't going to let this accident change the way I live. But it really bugs me to hear people complain. It's crazy what's [they take as] a major problem. Like I was in P.T. [physical therapy] and this lady had a hand burn, one little deformed finger and she had a small scar. I'm listening to her complain about her scars and her pain. I don't know how people complain. Look at me, I'm far worse and I don't complain.

Problems may arise when individuals rely on self-enhancement as a coping strategy. A belief in control over one's disabilities and self-enhancing social comparisons may or may not have any basis in reality, yet these tend to contribute to psychological adaptation.

Lazarus and Folkman (1984) noted that illusions can help people come to terms with a crisis or cope with a debilitating chronic illness. Greenwald (1980) suggested that illusions assist in the maintenance of the "self."

The adaptive significance of illusion-based cognitions is limited. For a short time, individuals may enhance their self-esteem by inflating their views of themselves. However, these illusion-based beliefs are easily disconfirmed. When a patient is confronted with his or her limitations, self-esteem is threatened. Twelve lower-middle-class subjects described situations that threatened their beliefs about themselves.

Joe sustained a 25% TBSA injury when a resin tank exploded. He made several contradictory statements throughout his interviews.

Well, I've never really needed much. I've always been independent. It's my well trained mind. They gave that to me in the Army. I went home just three weeks after my burn. It's because I'm tough and well trained.

When Joe returned to work he was given a desk job that he felt was unimportant. The company he worked for was planning to move to another state. Joe was not offered a position with the company when it relocated. He complained of chronic pain and fatigue despite the fact that his burned areas were small and completely healed. He also reported that he was "nervous" and "upset." Joe wanted to believe that he was in control of his life. Yet, he was faced with a chronic illness and the threat of unemployment. These realities contradicted his belief that he was "independent" with a "well trained mind." Perhaps his chronic fatigue and pain were more strongly related to emotional distress than physical problems.

Julie focused on her stubbornness and independence and yet, at the end of the first interview, she confessed that she was confronted daily with things that she couldn't do for herself. She experienced anger and frustration when she needed to ask her family for help. Her greatest fear was that she would trip on the back steps and would have to lay in the dirt until someone came home. Sometimes Julie felt anxious and depressed when she thought about her limitations. Every time she faced a difficult activity, her belief in her strength and independence was challenged.

All of the middle-class subjects expressed concern for other burn victims. They did not criticize patients they had seen in the hospital and/or clinics. The subjects in this group had stronger financial resources and supportive family relationships than the lower-middle-class subjects. Perhaps the middle-class subjects did not need to use negative social comparisons to enhance their self-esteem because they had other resources. Peggy, the 35-year-old woman who was burned in a car accident, made just this point. Since her burn she has been actively involved in volunteer work for various community agencies.

Even though I was hurt seven years ago, I still think back about the people who were in the burn unit when I was there. I've learned from all my volunteer work that there are so many people that don't have the money to get the things they need. I've never been faced with that. I couldn't imagine being burned and also having no money or no family. I've really been fortunate. Thank God.

Roy was a regional manager for a dairy foods company. He sustained a 30% TBSA burn when he accidentally ignited a gasoline can in his car with a cigarette lighter. He was hospitalized for three months and experienced numerous complications related to smoke inhalation. After

leaving the burn unit, he returned home to his wife and two children. Roy spent 35 minutes of his interview talking about his stoicism. He claimed that people should endure their problems quietly and not share their "dirty laundry" with people outside of the family.

I have always felt that I'm a strong person. I had a lot go wrong in the hospital. But I felt that I could handle it. I was raised by my parents to handle my problems. I think people talk too much about things that should be private, kept in the family. I know I had problems in the hospital, but a lot of people were a lot worse off. They had really big burns and some of them had no money, no family. Those are the people you ought to worry about. Not me. I can really see how some people with burns could have a lot of problems. I don't. My family and I have managed all of this pretty well.

The remaining middle-class subjects were more open than Roy about discussing their problems. However, they all believed that other burn victims faced more serious difficulties. The social class differences that emerged when subjects discussed other burn victims were not unusual. Other researchers have found a similar relationship between socioeconomic status and certain coping responses (Holahan & Moos, 1987). Avoidances behaviors are presented in the next section. There was marked difference between middle-class and lower-middle-class subjects in the use of avoidance as a coping strategy.

### Avoidance Behaviors

Sociodemographic factors of education and income, personality differences involving self-confidence and self-efficacy, and contextual factors of life events and family support each make significant contributions to predicting coping behaviors among a wide range of subjects (Holahan & Moos, 1987). Subjects with limited personal, social, and financial resources frequently engage in avoidance coping strategies. Avoidance behaviors include attempts to avoid confronting

the problem at hand and engaging in tension-reducing behaviors such as drinking, over-eating, and smoking. Complaints of chronic fatigue and accepting problems fatalistically represent some other avoidance behaviors.

Eleven lower-middle-class burn victims with TBSA injuries of 35% or less complained about chronic fatigue. These subjects had injuries that were partially or completely concealed by clothing. Visibly scarred areas were usually raised and purple. None of these subjects expressed concern about their appearance even when questioned directly by the researcher. Only 1 of the 11 subjects specifically stated that he wanted to avoid being seen in public. The rest of the subjects in this group stated that they didn't engage in activities due to fatigue. Since there were no strong physiological reasons for subjects with relatively small burns to experience fatigue so long after their injuries, it seems likely that the subjects were engaging in avoidance behaviors.

Nine of the lower-middle-class subjects had TBSA injuries that were greater than 40%. Four of these subjects, men who had worked in factories and were involved in industrial accidents, were disabled by their burns. The four disabled subjects had TBSA injuries ranging from 66% to 85%. These subjects were unable to respond to questions regarding their daily activities. The researcher asked all of the subjects to describe a typical day, starting when they got up in the morning. All of the disabled subjects said they did "nothing." Despite repeated rephrasing of the questions, the subjects' responses were the same. Jay, the 59-year-old gentleman who was injured in the explosion

at the chemical plant, gave the following response to a question about his daily routine:

Well, I get up around seven or eight in the morning. When I feel like it really. Then I sit. Yup, that's about it. I haven't been able to do much of anything since this happened. Everything jangles my nerves. I try to sit quiet. If the weather's OK I go out with the wife to the store. But usually I sit at home.

Jay's responses were similar to the responses that the researcher received from the other disabled subjects. All of these subjects had large injuries with severe scarring. Two disabled subjects were still plagued with open wounds three years after their accidents occurred. With one exception, these subjects discouraged visitors from coming to their homes. They stated that they were too tired for guests.

Alcohol and/or drug abuse was another avoidance behavior used by the lower-middle-class subjects. Six of the 12 lower-middle-class subjects with burns less than 35% TBSA admitted to using alcohol and/or drugs on a regular basis. All 6 were intoxicated at the time of their accidents. Their use of alcohol represented a long-standing pattern rather than a specific response to the burn injury. The subjects discussed their use of alcohol and drugs only briefly. All of them were anxious to change the subject and go on to another topic. Therefore it was difficult to assess the actual amount of alcohol and/or drugs being used.

One subject, with a 66% TBSA injury, bragged about his alcohol and drug use. He encouraged a few close friends to visit him at his trailer and "party." Gary was a 31-year-old horse groomer who had been involved in a tragic car accident seven years earlier. One woman was killed and two others were seriously injured when Gary lost control of his car and hit an electrical pole. He was hospitalized for three months and had

numerous skin grafting procedures as well as bilateral above-the-knee amputations. He had two close friends who visited him at his trailer and supplied drugs and liquor. Gary talked about his "parties" freely:

You asked how I handle things. Well, Melissa and Jerry and I get together and drink a few beers. Sometimes we'll get a little coke if we got the money. Man, it beats sitting around here and doing nothing. You could really do yourself in if you sat and did nothing. I'm not talking about killing myself or nothing. I just mean you get sorta crazy, thinking about the way things are. I wouldn't kill myself or nuthin. I'm glad I'm here. All I wanted was to get out of that Goddamned burn unit.

Eighteen burn victims from lower-middle-class backgrounds discussed their problems fatalistically. These patients had negative expectations regarding their futures. They were sure that their injuries occurred because unseen and uncontrollable forces were at work in their lives.

Sometimes I go stand where the accident happened. I figure that the Devil tried to get me. So I stand right there and dare him to come get me. I go there again and again. It's a dare.

I keep asking myself why God did this to me. Maybe I was a bad little girl or something.

Sometimes you just got to figure that someone's out to get you. that's all. Somebody said, "Hey, let's put some torment in my life." As if I didn't have enough problems to start with.

For these subjects, a fatalistic perspective negated the very point of coping. They passively accepted whatever the upcoming day offered. Sam, a 34-year-old male who sustained a 65% TBSA injury in a plane crash, commented: "I just take it as it comes. There's no sense lookin ahead because tomorrow might be worse. "

Some psychologists have suggested that individuals who use coping strategies that do not address the source of their problems are not coping effectively (Lazarus & Folkman, 1984). According to this

perspective, burn victims who accept problems fatalistically are not coping well. Unfortunately, many of the problems associated with a burn injury are not amenable to change. Wortman and Dintzer (1978)

wrote:

We believe that many of the behaviors associated with helplessness (giving up, losing interest in the outcome, and/or motivation to pursue it) are maladaptive only when the outcome in question is controllable or modifiable. If the outcome is truly uncontrollable, these behaviors may be highly functional.  
(p. 87)

As was noted, there were four disabled, lower-middle-class subjects who were confronted with mutilating and disfiguring injuries. They were unable to return to work and had limited financial resources. There was no hope that their future would be more promising than the present. Their fatalistic perspective and avoidance behaviors may have been the most effective ways for them to cope. The remaining lower-middle-class subjects also faced numerous problems. However, their fatalistic behaviors may have prevented them from addressing some problems that were responsive to action. For example, all of the lower-middle-class subjects physically were capable of increasing their activity levels. Increased activity would have been beneficial for their emotional and physical health.

Julie, the woman with the 95% TBSA injury, discussed her problems fatalistically. She talked about "taking things one day at a time" and "not looking too far ahead." However, she did not attempt to avoid people. She also did not engage in other avoidance behaviors such as smoking, drinking, or over-eating. Julie described her activities outside of the house:

I go wherever I want to go. I'm not gonna stay indoors. People stop and stare at me but I ignore it. [My sister] Sandy's the one who's embarrassing. We were at Disney World a few weeks ago and

some people were looking at me, so Sandy turned around and stuck her tongue out at them and yelled, "What are you looking at, freak?" I was so embarrassed. I wouldn't have done that.

Richard is the man who sustained a 63% TBSA injury when his van exploded. He was the only middle-class subject who engaged in any avoidance behaviors. As previously noted, Richard began working at night to decrease his contact with the public. However, Richard stated he always preferred to be alone. Even before he was injured, he engaged in few recreational activities and enjoyed being at home with his wife.

### Supportive Relationships

In the literature, the concept of coping has been equated with individual activities and styles of behavior (Gore, 1985). Common coping activities include following a plan of action and positively re-evaluating a situation. Another strategy that people frequently employ during a crisis involves eliciting the help of others. Conceptually, researchers have focused on social support and coping strategies as two distinct activities. Gore (1985) has questioned this research tradition and called the schism between social support and coping "artificial and cumbersome" (p. 264). Seeking help from others is increasingly viewed as an important part of the coping process (Folkman & Lazarus, 1984; Gore, 1985).

All of the burn victims relied on friends and relatives for assistance after leaving the hospital. However, the amount of social support varied depending on the subject's social class. The lower-middle-class subjects had a limited network of supportive relationships. Usually, one family member provided all of the care. The middle-class subjects had a broad social network. Frequently friends and relatives travelled long distances to stay with the burn victim upon his or her

return home from the hospital. A spouse, children, and neighbors also were available for assistance.

None of the subjects had to face the first six months after their injuries alone. Twenty-three subjects were married. One of the three divorced subjects lived alone but the other two lived with relatives. Six subjects were single. Three of these subjects lived with their fiancées. Three of the single subjects lived alone but family and friends lived nearby. One subject was widowed. She relied on her church group for assistance. She also visited her children frequently.

The amount of social support available to the subjects in this study was remarkable, given what other researchers have found regarding burn victims' social support. Epidemiologic studies suggest that burn victims are likely to be single and isolated. Few have supportive relationships to draw upon during the recovery period, despite a great need for help and physical care. Physical therapy and dressing changes are two major activities that are continued after discharge from the hospital. Unless the injury was mild, patients could not manage these tasks alone.

The subjects in this study in some ways were fortunate. Difficult and painful dressing changes were faithfully carried out by a caregiver. Caregivers often drove long distances to take subjects for physical therapy and clinic visits. Fifteen of the 23 lower-middle-class subjects depended on a spouse or fiancée to provide care. Ten of these 15 subjects reported that their spouses had taken over all household responsibilities. These 10 subjects had no other sources of support, placing a great burden on their spouses.

Thomas, the 25-year-old male who sustained a 10% TBSA injury to his right hand, spent an hour talking about his extreme pain and physical limitations. He reported that his wife provided all of his care:

My wife had to quit her job when I got burned. It's been real hard on her. But I need her there. When I get mad or upset, she better be there. It gets to me. It makes me feel like I ain't worth nothin' anymore. But I can't do nothin' about it. I don't want her back to work. Her place is at home. It's been hard but ain't nothin' to be done about it.

The idea that the wife's "place" is at home caring for the burn victim was shared by 10 lower-middle-class subjects. Thomas expressed minimal concern about the hardships that his spouse endured as a caregiver. Studies conducted with various patient populations have found that many patients are acutely aware of the effect that their illnesses have on their support providers (O'Brien, 1980; Peters-Golden, 1982). In this study, only one lower-middle-class subject expressed concern about the burden that his wife endured as a caregiver.

Michael, the 30-year-old male who was intoxicated at the time of his injury, had a 33% TBSA injury. His responses were similar to the responses Thomas gave when asked about his wife:

Right now my wife does everything for me. We were in the fern trimming business, she and I. I made her quit that when I got burned and she does everything for me. That's what she should do. I mean, that's how I feel. Sometimes it bothers me that she has to do everything, but that's just the way it is. She has to do it. She has to baby me. She told me she'd like to get back to work, but I can't have that.

During his interviews, Michael frequently stated, "That's the way it is." He believed that he needed constant attention from his wife. He was unwilling to consider other alternatives and was not able to name any activity he could do independently during the day. He stated that he "couldn't do anything." Michael's injury included burns to the upper

torso, back, arms, and left leg that required skin grafting. During the interviews, he had full use of all of his extremities. Physically, he did not need to depend on his wife for assistance. The researcher commented that he moved his arms and legs easily. Michael was upset by this statement and reiterated that he needed his wife to do "everything."

Twenty-two lower-middle-class subjects reported that they talked to their caregivers about their fears. They said that their caregivers supported and encouraged them when they were frightened and/or in pain. According to Thoits (1985), "evaluations of one's overall worth, lovability, importance, and competence depend, at least in part, upon the perceived appraisals of others with whom one regularly interacts" (p. 58). The caregivers were a source of reflected self-esteem for the burn victims.

Terry was a 30-year-old male who sustained a 30% TBSA injury when firecrackers exploded in his hands. Four of his fingers were amputated and he had scars across his cheeks and neck.

I have a lot of pain and I sit around and think about the things I can't do no more. My wife's real good. She'll sit and tell me that I'm doin good and that I still get around pretty good. It makes me feel like things aren't so bad for awhile.

Carl was a 24-year-old male who sustained a burn to the left side of his face, neck, and shoulder. He also had a circumferential injury to his left arm and lateral torso. He was splashed with battery acid when a scaffold broke at work. Carl's face was pink, with a small amount of hypertrophic scarring present along his jawline. Well-healed skin grafts were visible on his left arm. Carl reported that he relied on information and feedback from his siblings, parents, and fiancée about his appearance:

I tried to be careful. I use lotion. I keep the burned areas covered with clothes when I'm in the sun. I really do everything. My girlfriend rubs lotion in for me every day. She says I look good. I really need to hear that. I was pretty proud of how I looked. I always stayed tanned and worked out. Sometimes I think my family is sick of me asking them all the time so they just say "Oh, you look great." But mostly I think they mean what they say.

Only one lower-middle-class subject expressed feelings of frustration about receiving support from others. Julie was extremely scarred and deformed. Although her fingers were amputated, she was able to use both her hands for a variety of tasks. Julie's independence was a major issue during the interviews. When she left the hospital, Julie experienced fear and frustration. She was forced to depend on her mother-in-law for assistance:

My mother-in-law took care of me for the first month that I was out of the hospital. I wanted to stay with my mom but they said the bat [mother-in-law] would do it. She treated me like a retard. They blamed me for Sam's burns because he pulled me out of the plane. Hey, I didn't ask him to pull me out. Sam's family would spend hours with him and I'd just sit there. I didn't say anything, because I was afraid the bat would leave me alone. I can't dial the telephone and I was afraid to be left with no help.

Receiving help and support carries the implicit assumption that a person is incapable of solving his or her own problems (Brickman, Robinowitz, Karuza, Cohn, & Kidder, 1982). Julie's self-esteem was undermined by being thrust into a situation of dependency and helplessness. She fought to gain control over her life. Her sister was able to encourage Julie to resume her daily activities.

Often support providers make well-intentioned but ill-advised suggestions, such as encouraging a person who had a heart attack to "rest." Such comments constitute bad medical advice because the resumption of former activities is often feasible and desirable

(Finlayson, 1976). Ten lower-middle-class subjects reported that their family members did not allow them enough independence. Tracy was the 30-year-old housewife who sustained a 35% TBSA injury to her lower face, neck, chest, and arms in a plane crash. The accident occurred as Tracy was flying home in a Cessna. She had been a model for suntan lotion company and had completed an assignment in the Bahamas.

After leaving the burn unit, Tracy went to live with her ex-husband, Bill. Later she and Bill remarried.

When I first got home I didn't know what I wanted really. I was upset because I wanted to do things for myself but it hurt too much. My mother and Bill waited on me. I didn't do anything. But then when I went back to the clinic they really got after me. I had gotten really stiff and I was getting, what do call them? Contractures on my neck from not doing my exercises. I thought it was really awful. The nurse there showed me some pictures of how patients can look after a burn when they don't move around. It really scared me. It sort of was weird. I thought that the plastic surgeons could fix everything, like when Ann Margaret broke her jaw and they fixed it all. I thought it would work that way for me. I sort of felt bad about Bill and my mom waiting on me like that. But it hurt so much to do things myself.

All middle-class subjects had support from family and friends. The middle-class subjects reported that their caregivers understood their medical care needs and helped them carry out treatments. The middle-class subjects were selective about the amount of assistance they received. They asked for help when it was needed. However, they tried to be as independent as possible. John, the man with the 18% TBSA burn, talked about his wife and parents:

Mom and Dad flew down when I was hurt. Susie was great too. I was glad that Mom and Dad were here but I asked them to go as soon as I felt like I was up and around. I wanted to do things for myself and they understood it. Susie helps me if I need it, but I can really do everything for myself.

Three unusual instances arose related to social support. One subject had problems finding consistent social support. Two subjects

were unable to discuss their injuries with family and/or friends. A common misconception is that it is harmful for chronically ill people to discuss their feelings about their problems. According to Peters-Golden (1982), healthy individuals fear that such discussions are detrimental to patients and indicate poor adjustment to the illness. Because of these beliefs, the chronically ill are prevented from discussing their disease and its consequences. Janice, the young woman who was injured in a cooking accident, reported that her family never discussed her accident. She stated that the memory was too painful for them. Her family refused to meet with the researcher. Janice's husband was not at home during the interviews and her two children stayed in their bedrooms. Janice stated that it was difficult to avoid discussing her accident. However, she felt that her family's feelings had "to come first." She scrupulously avoided any mention of her burn injury despite the fact that she wanted to talk about what had happened.

George, the 53-year-old man who sustained an 85% TBSA injury, stated that he couldn't discuss his injury with anyone except a fellow burn victim. George had been in an industrial accident with two other individuals. He thought that healthy people did not feel comfortable discussing his injury:

People look at me and then look away. They get nervous and all. You sit here and just look at me normal. Other people, you can tell they don't know where to look and they don't want to talk about the burn. The only person I talk to about this is Joe. He was burned as bad as me. No one understands like he does. We can cry and talk together. A regular person could never understand. Even other people who get burned can't understand until they get out of the hospital. You can't describe torment to somebody else. You gotta live it.

As previously presented, all of the subjects had a caregiver who assisted them with various activities. Only one subject had some

problems obtaining help consistently. Virginia, the 67-year-old woman who was in the house fire, relied on her next door neighbor for help with dressing changes. The neighbor was reliable during Virginia's first six months home from the hospital, then her neighbor learned that her son had cancer and she had to care for him. As a result, Virginia lost her closest support. However, she had other supportive relationships. She was active with her church group. She also visited her children and grandchildren frequently.

The amount of social support the subjects in this study received was unusual for two reasons. First, the epidemiologic studies of burn-prone patients suggest that many are isolated and have few resources (Crikelair et al., 1968). Second, factors such as the severity of the illness or the amount of pain the patient experiences may be important determinants of support (Gore, 1985). Peters-Golden (1982) has suggested that patients who are more severely ill may actually receive less support than those with better health. In the present study, the most severely burned patients had support from several family members. Of the 11 subjects with TBSA burns greater than 50%, 7 subjects received assistance from a minimum of three other people. This finding involved both middle- and lower-middle-class subjects.

#### Relationships with Health-Care Professionals

Burn victims have relationships with many health-care professionals. The burn unit has a "team" of professionals, including physicians, nurses, psychologists, social workers, physical therapists, occupational therapists, and vocational rehabilitation counselors. All of the middle-class subjects spoke fondly about their physicians. They believed their doctors were instrumental in their physical and cosmetic

recoveries. The middle-class subjects understood who the various health-care professionals were and felt that each of them made an important contribution to their recovery. All of the middle-class subjects returned to the clinic for scheduled visits. Richard was the only subject who required reconstructive procedures and he adhered faithfully to the treatment plan.

John was the 32-year-old man who was injured when oily rags caught on fire in his garage. His response about the medical and nursing care in the burn unit was representative of comments made by other middle-class subjects:

I had total confidence in [my doctor]. I also had good feelings about the nurses. I can't remember their names. Everyone had a job to do and they did it. Including me. By the time I went home I understood exactly what I had to do to take care of myself and get well.

Twelve lower-middle-class subjects reported that they were "grateful" to the physicians and nurses in the burn unit. Eleven lower-middle-class subjects reported that they were angry about the way they were treated by the burn unit staff. Emma, a 40-year-old housewife with a 56% TBSA injury, stated that she and her family were afraid of the physicians:

I'd try to tell them [doctors and nurses] something was wrong. They wouldn't listen. Like I'd tell them my bladder hurt. They didn't do anything. Then it turned out I had an infection. My husband tried to talk to them about how I was doing. But no one spent much time with him. It's like we were white trash.

Psychiatric assistance was offered to some burn victims.

Twenty-one lower-middle-class subjects were evaluated by a psychiatrist during their hospitalizations. In contrast, two middle-class subjects saw a psychiatrist while they were in the burn unit. The two lower-middle-class subjects who did not see a psychiatrist were over 65 years

old. Referrals for psychiatric consultations were usually initiated by the nursing staff. The behaviors that led to such requests varied. Sometimes patients were yelling or crying too loudly during their dressing changes. Other patients became verbally abusive, refused physical therapy, or made sexually suggestive comments to the nurses. When admonishments by the nursing staff and/or the residents failed, a psychiatric consult was requested. The typical diagnosis was "adjustment reaction with depressed mood." In addition, eight subjects were advised to seek outpatient treatment for substance abuse following discharge from the hospital.

One of the lower-middle-class subjects continued to see two different psychiatrists six years after his injury. Jay and his wife saw a psychiatrist at the hospital and one in their hometown. Jay commented:

I think if I were to give some advice to families of burned people I would tell them to get a psychiatrist right away. They may not realize or accept it but the whole family needs to go. You need someone to talk to because nothing in your life is ever the same again.

The remaining lower-middle-class subjects did not continue to see a psychiatrist after they left the hospital. Six subjects saw a social worker for the first three months to one year after their accidents. These subjects had TBSA injuries of 40% or greater. They reported that the social worker was an important resource as they adapted to their new lives.

#### Alterations in Values and Priorities

Lazarus and Folkman (1984) noted that there are two major groups of problem-focused coping strategies -- those directed at the environment and those directed at the self. An individual can shift his or her

level of aspiration, develop new standards of behavior, or find new sources of gratification. These problem-focused strategies are directed inward. Five of the 23 lower-middle-class subjects reported that they re-evaluated their priorities in life. They stated that they realized the importance of family and friends since they had been burned.

With one exception, all the middle-class subjects in this study re-evaluated their lives and established new priorities. They had the educational, financial, and social resources to approach the changes in their lives flexibly. The following quotes were typical for the middle-class subjects:

Everything used to bother me. I used to be compulsive about paying bills on time. Now I have a stack of bills on my desk. When I get to it I'll pay them. But I don't worry about it anymore. I realize other things are more important.

After seeing some of the horrible things in the burn unit, I feel very fortunate. I guess we never stop to think about what we have. Well, I think about it more now. I think about some of those poor people. My husband used to give money to this one poor girl whose husband was in the burn unit. The whole thing makes you stop and think.

I don't ever think I'll take anything for granted again. I'm glad to be alive, to enjoy my wife and kids.

Richard was the only middle-class subject who did not discuss his priorities or long-range plans. He believed that his life was not going to change significantly in the future. He planned to continue working for his present employer. He thought that his marriage was stable and his health was good. Richard reported that he was "angry" about his accident but "it could have been worse."

#### Dealing Actively with the Problem

According to Holahan and Moos (1987), individuals with good personal and environmental resources are likely to use active coping

strategies. They engage in activities that are directed towards solving the problem. Lipowski (1970-1971) noted that subjects who view their illness as a challenge tend to be flexible and rational. Disease or disability is seen as a life situation which imposes demands and tasks that must be mastered. Five lower-middle-class subjects with 35% TBSA burns or less stated that they followed all the medical instructions so that they could overcome their injuries. These subjects engaged in exercise programs and returned to work within 8 to 16 weeks after their release from the hospital.

All of the middle-class subjects attempted to overcome the problems imposed by their injuries. Pearlin (1983) noted that the upwardly mobile are less affected by undesirable life events and suggested that they have "the sort of personal characteristics -- feelings of self-esteem, confidence, perseverance -- that are the stuff of competent problem management" (p. 164). Burn victims from middle-class backgrounds are more likely than their lower-middle-class counterparts to utilize positive, optimistic coping efforts.

Paul was a 30-year-old law student who sustained an 18% TBSA injury in a plane crash. He had burns to his arm and chest that were concealed by clothing.

I worked very hard to follow all of [the doctor's] instructions. I wanted to get well so I could do all of the things I used to do. And I kept trying even if I didn't feel like it. I wanted to get back to school and on with my life.

John coached a little league team. He talked about how he tried to confront his problems and how he tried to instill that belief in his players.

I coach five to six days a week. My feet and legs hurt sometimes. But I keep at it. I'm not a quitter and I never have been. It

bothers me to see a kid on the team whimp out and say he's sick. You've got to keep going even when you don't want to. I tell my kids that all the time.

The remaining middle-class subjects talked about the plans that they made to follow their medical regimen. All of the subjects returned to work within the first six month after their accidents. They returned to their former positions and resumed most of their preburn activities.

#### Adaptational Outcomes

As a result of their injuries, all of the burn victims had to reorganize their lifestyles and activities. According to Strauss (1984), "The chief business of chronically-ill persons is not just to stay alive or keep their symptoms under control but to live as normally as possible despite the symptoms and the disease" (p. 79). In this study, all of the subjects attempted to maintain what Strauss called a "new level of normality" (p. 86). In total, 20 out of 33 subjects returned to their former occupations. Five lower-middle-class subjects required a change in their employment. Eight lower-middle-class subjects were disabled as a result of their injuries. All of the middle-class subjects returned to their jobs.

The resumption of recreational activities and other social roles is part of the adaptation. Thirteen lower-middle-class subjects gave up all social and recreational activities that they had pursued prior to their injuries. These 13 subjects had TBSA injuries ranging from 10% to 85%. The remaining 10 lower-middle-class subjects altered their recreational activities to avoid being in direct sunlight.

One lower-middle-class subject was divorced after her injury. However, she stated that she and her husband had numerous long-standing problems unrelated to her burn injuries. Nine of the 10 middle-class

subjects resumed their former recreational activities. One middle-class subject obtained a divorce after his accident. He reported that he and his wife were considering a divorce before his accident occurred.

Despite the numerous role strains created by the burn injuries, all of the subjects reported that they were glad to be alive. They had survived a difficult and painful hospital course to return to family and friends. Even subjects who were grossly disfigured were proud of the fact that they had survived.

#### Chapter Summary

In this study, the appraisal and coping processes were explored. Domains or categories were formed as part of the data analysis. The domains were sorted into five taxonomies. The taxonomies included reliving the accident and hospitalization, the burn victims' lives prior to their accidents, the role strains created by the burn injury; the coping strategies employed, and lifestyle changes and adaptational outcomes. A componential analysis revealed that the subjects' responses varied depending on their social class backgrounds.

Lower-middle-class subjects experienced a greater number and intensity of problem or role strains than middle-class subjects. Coping strategies also differed for the two groups. However, the differences between the two groups also may be related to the severity of the burn injury. Lower-middle-class subjects had larger burn injuries than the middle-class group. Six of the 10 middle-class subjects had 30% TBSA injuries or less. Four middle-class subjects had injuries ranging from 47% to 63% TBSA. The 23 lower-middle-class subjects had TBSA injuries ranging from 10% to 95%. Twelve subjects in the group had 30% TBSA

burns or less. Eleven lower-middle-class subjects had TBSA injuries of 31% or greater. Four of these subjects had TBSA injuries ranging from 70% to 95%.

All of the subjects spent varying amounts of time discussing their accidents and burn unit experiences. The subjects' most vivid memories were related to their experiences with pain. Subjects also remembered the other burn victims who were in the burn unit with them. The following points emerged as subjects discussed their hospitalization:

1. Fifteen of the 23 lower-middle-class subjects boasted about their high pain tolerances. These subjects had burn injuries ranging from 10% to 95% TBSA.

2. None of the middle-class subjects discussed the pain that they experienced in the burn unit. Eight of the 10 middle-class subjects reported that their most vivid memories of the burn unit involved other patients.

All of the subjects attempted to find a reason for their suffering. Their explanations varied depending on their social class backgrounds.

1. Eighteen of the 23 lower-middle-class subjects gave fatalistic reasons for their accidents. They believed that God wanted them to be burned.

2. Five lower-middle-class subjects believed that their accidents were due to their own carelessness.

3. All of the middle-class subjects attributed their accidents to situational factors.

During the interviews, subjects discussed what their lives were like before they were burned. Twenty-six of the 33 subjects had either acute or chronic problems before they were injured. Twenty-one of the

26 subjects who had pre-existing problems came from lower-middle-class backgrounds. Five middle-class subjects experienced some turmoil in their lives immediately prior to their injuries. However, their problems were short-lived. Nine subjects had a history of alcohol and/or drug abuse. All nine were from lower-middle-class backgrounds.

All of the subjects discussed the changes in their lives created by their burn injuries. Each subject faced a variety of problems or role strains. Four distinct kinds of role strains emerged from the interview data. They are physical alterations, alterations in social roles and activities, financial changes, and altered future plans. The subjects experienced the following physical changes:

1. Seventeen of the 23 lower-middle-class subjects with TBSA injuries ranging from 10% to 85% stated they never overcame problems with fatigue.

2. Six lower-middle-class subjects and nine middle-class subjects experienced problems with fatigue that resolved within one year after their injuries. Five of the six lower-middle-class subjects who did not have problems with fatigue had TBSA injuries of 30% or less.

3. One middle-class subject with a 63% TBSA burn reported that he had problems with chronic fatigue.

4. All of the subjects complained about problems with fragile skin. Subjects' complaints about their skin were related to the size of their injuries. Individuals with larger burns had more severe skin problems.

5. Sixteen subjects reported that they had developed numerous health problems related to the burn injury. Some examples of the health

problems included shortness of breath, hypertension, ulcers, and hearing loss.

6. Seventeen subjects reported that they had problems with chronic pain. With one exception, these subjects had 35% TBSA injuries or greater. Sixteen of the 17 subjects who complained about chronic pain came from lower-middle-class backgrounds.

The fatigue, pain, and fragile and scarred skin prevented many subjects from resuming their former social roles and activities.

1. In the lower-middle-class groups, eight subjects had not returned to work. Five subjects required a job change after their accidents. Fourteen lower-middle-class subjects experienced changes in recreational activities and personal relationships. Nine of the lower-middle-class subjects resumed all of their preburn activities. All nine of these subjects had 35% TBSA burns or less.

2. All of the middle-class subjects returned to their former jobs. With one exception, all of the middle-class subjects resumed their former recreational activities.

The changes in job-related activities created financial problems for some subjects. None of the middle-class subjects stated that they experienced financial difficulties as a result of their burns. Eighteen of the 23 lower-middle-class subjects expressed concerns about money and/or insurance. Five lower-middle-class subjects stated they had no serious financial problems. All of these subjects had less than 35% TBSA injuries.

All of the subjects experienced emotional changes after their injuries. Ten lower-middle-class subjects experienced feelings of hopelessness and depression that resolved within 12 to 18 months after

leaving the burn unit. These 10 subjects had less than 35% TBSA injuries. Reports of uncontrollable weeping and nervousness were common among the remaining 13 lower-middle-class subjects. These subjects had TBSA injuries ranging from 10% to 86%. Only 1 middle-class subject, with a 63% TBSA injury, experienced chronic feelings of sadness and depression.

The changes and/or loss of roles threatened the burn victims' feelings of self-esteem. Coping behavior is an attempt to preserve and protect feelings of self-esteem. In this study, subjects used the following coping patterns: social comparisons, avoidance behaviors, supportive relationships, relationships with health-care professionals, alterations in values and priorities, and active problem-solving attempts.

Subjects discussed their positive qualities and compared themselves to other burn victims. Eighteen lower-middle-class subjects made numerous, disparaging remarks about other burn victims. They discussed how well they coped with their injuries as compared to other burn victims that they had seen. None of the middle-class subjects criticized other burn victims. Instead, the middle-class subjects expressed concern for the seriously burned individuals they had seen in the hospital and the clinics.

All of the lower-middle-class subjects used a variety of avoidance behaviors as they coped with their burn injuries. The avoidance behaviors used included attempts to avoid confronting the problem and engaging in tension-reducing behaviors such as drinking, over-eating, and smoking. Complaints of chronic fatigue and accepting problems fatalistically represent some other avoidance behaviors seen in the

study. Only one middle-class subject engaged in any avoidance behaviors. This subject had a large, visible burn injury.

All of the burn victims relied on friends and relatives for assistance after leaving the hospital. Twenty-three subjects were married. The remaining subjects had other family members or friends who provided support and assistance. Fifteen of the 23 lower-middle-class subjects depended on a spouse or fiancée to provide their care. All of the middle-class subjects had an extensive social support network consisting of family members and friends.

The middle-class subjects also relied on health-care professionals for support. The middle-class subjects spoke fondly about the physicians and nurses. Twelve lower-middle-class subjects reported that they were "grateful" for the health-care professionals in the burn unit. However, 11 lower-middle-class subjects reported that the burn unit staff did not listen to their concerns. Seven lower-middle-class subjects saw a social worker or a psychiatrist for varying lengths of time after they left the hospital.

The middle-class subjects used two additional coping strategies. Nine middle-class subjects re-evaluated their lives and established new priorities. These subjects viewed their injuries as challenges to be overcome. Five of the 23 lower-middle-class subjects reported that they re-evaluated their lives and actively attempted to overcome the problems created by their injuries. These 5 subjects had 35% TBSA injuries or less. The middle-class subjects actively approached their problems and set goals for their rehabilitation.

## CHAPTER V SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

### Summary

Rehabilitation is a dynamic process that begins the moment the person is injured and continues for a lifetime (Bowden, Jones, & Feller, 1979). Burn victims often face years of rehabilitation. Many undergo surgical reconstruction for functional and cosmetic deformities for as long as 20 years after their injuries. During the rehabilitation period, burn victims must learn to live with permanent disfigurement, physical limitations, and chronic pain. The influence of personal and situational variables in adaptation to chronic illness has received increasing attention in the current literature. Specifically, interest has grown regarding the effect of an individual's perception or appraisal of a stressful event and the resultant coping processes (Lazarus & Folkman, 1984).

The purpose of this study was to explore the appraisal and coping processes employed by burn victims using qualitative methods. Thirty-three subjects were selected from a list of 312 patients who were treated at a Southeastern regional burn unit and met the criteria for inclusion into the study. The major data collection tools were ethnographic interviews and medical record review. Spradley's model (1979) for analyzing ethnographic data was employed.

The literature on coping and stress did contain information that was useful in exploring burn victims' appraisal and coping strategies. Many researchers have emphasized the importance of understanding situations in terms of their significance to the individual (e.g.,

Lazarus & Folkman, 1984; Sarason & Sarason, 1985). In any stressful situation, an individual makes a series of judgments about his or her well being. Based on these judgments, various coping strategies are employed.

Many researchers have studied the psychological adaptation of severely burned individuals during hospitalization (Steiner & Clark, 1977; Tollison, Still, & Tollison, 1980; Wachtel, 1985). There is a consensus regarding burn victims' reaction to acute, life-threatening stresses. However, systematic studies of burn victims' long-term psychosocial adjustment are rare. The issue of psychological adjustment is important because modern burn care has dramatically improved survival statistics. As more burn victims survive, an understanding of the variables that affect the recovery process is crucial.

Since 1943, researchers have conducted eight separate studies addressing the long-term psychosocial adjustment of the adult burn victim. Six of these suggest that burn victims experience few long-term sequelae (Adler, 1943; Andreasen & Norris, 1972; Blades, Mellis, & Munster, 1982; Chang & Herzog, 1976; Davidson, Bowden, & Feller, 1981; Feller & Bowden, 1985). In these studies, the researchers concluded that burn victims experience a post-traumatic neurosis, with feelings of helplessness, hopelessness, and depression. Within one year after the injury, these feelings resolved without further problems. Andreasen and Norris (1972) suggest that burn victims experience a sense of personal triumph and renewed self-esteem because they have survived such a traumatic injury.

One researcher has questioned the results of the studies described above. Bernstein (1976, 1982, 1983) interviewed burn victims who were

seen on an outpatient basis following their injuries. He found that many burn victims experienced feelings of extreme hopelessness and depression and had few resources to draw on as they attempted to adjust to their burn injuries.

The literature on psychosocial reactions to burn injuries provides little information related to burn victims' interpretations of their problems. Even less is known about how burn victims cope with the numerous difficulties created by their injuries. In fact, there were no studies in the literature specifically addressed to burn victims' appraisal and coping processes.

The present study adds breadth and depth to both the study of burn victims and the study of stress and coping. In this study, the researcher explored new variables related to the psychosocial adjustment of burn victims to their injuries. First, prior researchers have not examined burn victims' perceptions of their injuries. According to Lazarus and Folkman (1984), an understanding of individual perceptions or appraisals is the key to understanding the coping process. In this study, subjects were asked to describe their post-burn lives. They were also asked how they felt about the changes in their lives. In response to these questions, subjects described four areas that were stressful and problematic. These four areas represented role strains or the hardships and problems that the burn victims experienced as they engaged in their social roles. Subjects in this study experienced the following role strains: physical alterations, alterations in social roles and activities, financial changes, and emotional changes.

Role strains are a threat to an individual's sense of mastery and self-esteem. Coping is an attempt to mollify the threatening aspects of

a stressful situation. Coping behavior also is an attempt to preserve and protect feelings of self-esteem. In this study, the researcher described the coping processes burn victims employed as they adapted to an acute and traumatic change in lifestyle. The coping behaviors that emerged from the interview data included making social comparisons, engaging in avoidance behaviors, relying on supportive relationships, developing relationships with health care professionals, making alterations in values and priorities, and engaging in active problem solving attempts.

Issues related to the burn victim's socioeconomic background were explored in this study. It is impossible to understand the stress imposed by the burn injury without reference to the social context in which it occurs. Bernstein (1983) reported that his patients had limited financial and educational resources. In contrast, Andreassen et al. (1972) and Feller and Bowden (1985) studied only white, middle-class subjects. However, these researchers did not address social class issues as they presented their results.

In this study, subjects' responses varied depending on their social class backgrounds. Lower-middle-class subjects experienced all of the previously described role strains. The problems or role strains persisted over time. In contrast, middle-class subjects did not experience all four of the role strains. The problems that they had were short-lived, resolving within six months to one year after their injuries.

Coping responses varied for middle-class and lower-middle-class subjects. Lower-middle-class subjects used avoidance behaviors and negative social comparisons as their primary coping strategies.

Middle-class subjects engaged in active problem-solving attempts and established new priorities as they adjusted to their injuries.

The present study adds new information to the body of research on the psychosocial adjustment of the burn victim. Some of this study's contribution may be attributed to the methodology used to examine burn victims' perceptions regarding their injuries and their altered lifestyles. Ethnographic interviews were conducted with all of the subjects. Core questions were used to guide the interviews. However, subjects were encouraged to raise issues that were important to them. In previous studies, researchers addressing the psychosocial adjustment of burn victims used questionnaires to obtain information related to the subjects' functional states. In these studies, issues related to employment, recreational activities, and personal relationships were explored. For example, researchers merely noted if a subject had returned to his or her previous job, or if a change in employment was required. Subjects were not asked how they felt about the changes in their lives created by their injuries.

In the present study, 8 of the 33 subjects were disabled by their injuries and were unable to resume pre-burn recreational activities. Two subjects were divorced after their accidents, but reported that their divorces were unrelated to their burn injuries. Unlike previous researchers who have found that burn victims experience an enhanced self-esteem following their injuries, 14 subjects in this study experienced chronic feelings of sadness and depression. Subjects who had problems with emotional changes had TBSA injuries from 10% to 95%. Only 1 of the 14 subjects who experienced emotional changes was from a

middle-class background. The issue of social class has not been addressed in previous studies of burn victim's psychosocial adjustment.

This study also makes a contribution to the research related to appraisal and coping processes. Lazarus and Folkman (1984) advocated studying the coping process within specific contexts. The demands associated with different chronic illnesses vary. Therefore, appraisal and coping must be studied with respect to the demands created by a particular disability. There were no studies exploring the coping strategies used by adult burn victims one year after their injuries.

The findings in this study are consistent with the findings from other studies related to the appraisal and coping process. For example, Billings and Moos (1981) found that the use of active problem-solving strategies was more prevalent among well-educated subjects. Individuals with fewer financial and educational resources tend to avoid dealing with stressful events. In this study, the 10 middle-class subjects primarily utilized active problem-solving strategies and supportive relationships as they adapted to their burn injuries. Lower-middle-class subjects used avoidance behaviors and devaluation of others as their primary coping strategies.

### Conclusions

In the present study, the researcher reached the following conclusions about burn victims' appraisal and coping processes.

1. During their interviews, burn victims focused on their accidents and hospital experiences. Lower-middle-class subjects focused on the pain that they endured in the burn unit. Middle-class subjects discussed their memories of other burn victims. All of the subjects offered an explanation for why their accidents occurred. Middle-class

subjects attributed their accidents to carelessness, whereas lower-middle-class subjects believed that their injuries were God's will. The subjects searched for meaning in the accidental events in order to gain control over the incident and enhance their feelings of self-esteem.

2. Subjects in this study faced many threats to their self-esteem. During the hospitalization, the subjects faced numerous painful treatments and surgeries. After returning home, the subjects had to adapt to physical alterations, altered social roles and activities, changes in emotional health, and financial hardships. All of these problems or role strains represented a threat to the subjects' feelings of mastery and self-esteem.

3. The subjects' role strains may have been related to their degree of disability as well as to their lack of financial and social resources. Lower-middle-class subjects experienced a greater number and intensity of role strains than middle-class subjects. Lower-middle-class subjects also had larger burn injuries than the middle-class group.

4. All of the subjects in this study used a variety of emotion-focused and problem-focused coping strategies. Coping behavior is an attempt to preserve and protect feelings of self-esteem (Pearlin, 1983). Eighteen of the 23 lower-middle-class subjects compared themselves to other burn victims. These 18 subjects made numerous disparaging comments about other burn victims. None of the middle-class subjects used this coping strategy. Eighteen lower-middle-class subjects engage in a variety of avoidance coping strategies, such as drinking, withdrawal, and accepting problems fatalistically. For the

lower-middle-class subjects, there did not seem to be any relationship between burn size and the use of avoidance behaviors. One middle-class subject utilized avoidance strategies. This subject had a 63% TBSA injury with extensive scarring on his jaw and neck. Three other middle-class subjects had large burn injuries (greater than 45% TBSA). However, none of their injuries involved extensive, visible scarring. None of these three subjects engaged in any avoidance behaviors. The visibility of the burn injury may play an important role in the subject's choice of coping behaviors.

5. All of the subjects had one or more friends and/or relatives who provided ongoing support and assistance. Researchers have reported in epidemiologic studies that burn victims are likely to be single, isolated, and have few supportive relationships to draw upon during the recovery period. In this study, 15 of the 23 lower-middle-class subjects relied on a spouse for their care. The remaining middle- and lower-middle-class subjects relied on two or more family members and for friends for support. Perhaps individuals who survive the acute phase of the burn trauma are more likely to have supportive relationships than those burn victims who die from their injuries.

6. The middle-class subjects established new priorities in their lives. They also actively confronted the problems created by their burn injuries by engaging in exercise programs, returning to work, and resuming other social activities.

7. None of the middle-class subjects were disabled by their injuries. Eight lower-middle-class subjects suffered permanent disabilities. The fact that the lower-middle-class subjects suffered more severe burn injuries than the middle-class subjects reflects

lifestyles differences between the two groups. Nine lower-middle-class subjects were involved in alcohol related accidents. Seven lower-middle-class subjects were involved in industrial accidents. None of the middle-class subjects reported using alcohol or drugs at the time of their accidents. One middle-class subject was injured at work.

### Recommendations

The recommendations from this study fall into two categories: recommendations for future research and suggestions for health-care professionals.

#### Recommendations for Future Research

The present study may be of use to other researchers in the following ways:

1. This study provides a detailed description of the problems encountered by burn victims as they adapt to their injuries. This study also contains a detailed description of the subjects' coping behaviors. These descriptions provide variables for future study.

2. Qualitative methodologies are not frequently used to study burn victims' adaptation to their injuries. The use of ethnographic interviews has contributed to the information that is available regarding burn victims' psychosocial adjustment. Therefore, researchers may want to use quantitative methodologies in future studies related to burn victims.

3. This study has raised questions for further quantitative research. The following questions arising from the findings in this study need to be explored in future quantitative research:

- a. How does the visibility of the subject's scarring affect the appraisal and coping process?

- b. How do personality variables such as feelings of confidence and self-efficacy influence the appraisal and coping process?
- c. How do subjects' causal attributions for the accident (i.e., blaming the accident on themselves versus others or fate) affect their choice of coping strategies?

4. This study also raised questions for further qualitative research. What types of coping strategies are employed by middle-class subjects with very large burn injuries (greater than 65% TBSA). If more middle-class subjects with large burn injuries were studied, perhaps the relationship between role strains, coping strategies and social class could be described more clearly.

#### Use of Findings to Practitioners

After describing the special problems encountered by burn victims, it is difficult to accept statements made by other researchers that suggest burn victims emerge from their injuries with a renewed sense of self-esteem. Burn victims are likely to come from lower social classes. They have few social, financial, and educational resources as they attempt to cope with all of the horrors associated with a burn injury. Since the rehabilitation period may last as long as 20 years, it is crucial that health-care professionals understand the variables that may affect the recovery process. During the rehabilitation period burn victims must learn to live with their disabilities. To help burn victims accomplish this goal, health-care professionals need to have a variety of patient-education and rehabilitation programs available for the burn victim. This study may be useful to health-care professionals in the following ways:

1. Educational efforts must several different directions.

Obviously patients must be taught how to care for themselves at home. The fields of medicine and nursing continue to focus on acute care needs. Health-care professionals must broaden their focus to include an emphasis on the lives of patients outside of the hospital setting. This study contains information that will enhance the health-care professional's understanding of burn victims' problems. For example, burn victims face pain, emotional changes, and financial hardship. These problems may affect the rehabilitation process. This study also contains information on the relationship between social class and coping behaviors. Health-care professionals must consider the relationship among background variables, coping strategies, and adaptational outcomes as they interact with burn victims.

2. The information in this study may be useful in planning patient education and rehabilitation programs. The literature on rehabilitation is often idealistic and offers few concrete suggestions to practioners. For example, Davidson, Bowden, and Feller (1981) viewed the well-adjusted individual as someone who accepts the reality of his or her situation and moves in a goal-directed manner toward overcoming his or her problems. While goal-directed activities may lead to a good adjustment for some patients, this may not be true for every burn victim. Individuals who engage in problem-solving coping efforts adjust well to their difficulties if their problems are amenable to change. If the outcome is uncontrollable, then emotion-focused coping strategies (such as enhancing oneself though through social comparisons) may be more appropriate than goal-directed activities. For example, in this study, four disabled subjects with large burn injuries (greater than

50% TBSA) engaged in a wide range of avoidance behaviors. It is important for health-care professionals to carefully assess each patient and assist him or her in determining which aspects of the burn injury are amenable to change. The rehabilitation program can then be individualized according to the severity of the patient's injuries. For example, a disabled patient with a large burn injury may not be able to work. However, he or she may be able to learn how to perform his or her own skin care. Emotion-focused coping may be useful in adjusting to the loss of employment. However, the patient could use problem-solving efforts to cope with skin care problems.

3. This study contains information related to social class and the use of coping strategies. According to Kaplan (1983),

The social identities that a person has at birth influence the possession of resources that are more or less effective in facilitating the satisfaction of environmental demands. The identity associated with socioeconomic status is a case in point. Thus, birth into higher socioeconomic strata increases the likelihood of receiving more formal education. Formal education increases the readiness to deal with complexity and novelty . . . lower-class subjects tend to manifest passiveness - dependency, suspicion, and non-participation. (p. 222)

Bernstein (1983) noted that health-care professionals' attitudes toward the physically disabled are influenced by social class differences. The social class of both the health-care provider and the patient may influence their interactions. Lower-class patients may be attractive to nursing and medical staff only if they act grateful and dependent and do not ask too many questions (Bernstein, 1983).

Health-care professionals need to be aware that a patient's social class background may influence his or her attitudes toward that patient. They also need to be aware of the resources that are available to the patient depending on his or her social class. It would be thoughtless

and unreasonable to plan a rehabilitation program that the patient does not have the resources to complete. The health-care professional needs to develop an awareness of available community agencies that may be able to provide assistance to patients with limited resources. Finally, the physicians, nurses, and therapists need to establish reasonable goals based on the patient's needs and resources. By establishing reasonable goals, patients and families can have successful experiences as they adjust to their new lives.

APPENDIX A  
FORM LETTER TO POTENTIAL CANDIDATES

Dear :

I am a registered nurse associated with the Burn Unit at Shands Teaching Hospital. Dr. Bingham has given me permission to contact you. Currently I am contacting people who have experienced a burn injury. This is part of a study to determine the kinds of problems that burn victims have after being discharged from the hospital. If you agree to participate in the study, I would like to interview you and a family member about your recovery from your injury. The interviews will be conducted on two separate occasions. Interviews will take at least an hour, possibly longer. During the interviews I will ask you questions about the problems that you have had and how you have coped with these problems since your injury. I will also be contacting you by phone so that I may introduce myself and discuss the study with you further and answer any questions that you might have.

Sincerely,

Elizabeth Shenkman, R.N., M.S.N.

ES/gap

APPENDIX B  
CORE QUESTIONS FOR THE CAREGIVER

Demographic Data

I. Patient Identification

1. Medical Record Number
2. Date of Interview 1
3. Date of Interview 2
4. Patient qualifies for study by:
  - (a) Total burn over 15%
  - (b) Full thickness burns to hands
  - (c) Full thickness burns to face
  - (d) Over 18 years of age
5. Age
6. Age when burned
7. Sex
  - (a) Male
  - (b) Female
8. Race
  - (a) Caucasian
  - (b) Black
  - (c) Hispanic
  - (d) Oriental
  - (e) Other \_\_\_\_\_
9. Marital status
  - (a) Single
  - (b) Married
  - (c) Widowed
  - (d) Divorced
  - (e) Separated
10. Has this changed since the burn injury?
11. Number of children in family

## 12. Primary method of support of family

- (a) Salary or wages
- (b) Welfare
- (c) Self-employed
- (d) Social Security
- (e) Workman's Compensation
- (f) Pension
- (g) Other

## 13. Has this changed since the burn injury?

## 14. What was the primary method of support before the injury?

## 15. Family yearly income

- |                          |                          |
|--------------------------|--------------------------|
| (a) Under \$6,000        | (f) \$25,000 to \$29,999 |
| (b) \$6,000 to \$9,999   | (g) \$30,000 to \$39,999 |
| (c) \$10,000 to \$14,999 | (h) \$40,000 to \$49,999 |
| (d) \$15,000 to \$19,999 | (i) over \$50,000        |
| (e) \$20,000 to \$24,999 |                          |

## 16. Has this changed since the injury?

## 17. If yes, what was your income before the injury?

## 18. Living situation

- (a) Alone
- (b) With spouse
- (c) With spouse and children
- (d) With parents
- (e) With father
- (f) With mother
- (g) With stepfather
- (h) With stepmother
- (i) With relatives other than parents
- (j) With children
- (k) With friends
- (l) Other \_\_\_\_\_

## 19. Has this changed since the injury?

## 20. Who did you live with before the injury?

## 21. Home setting

- (a) Buying single dwelling
- (b) Buying condominium
- (c) Rent single dwelling
- (d) Rent apartment
- (e) Buying mobile home
- (f) Renting mobile home
- (g) Renting room

22. Has this changed since the injury?
23. Where did you live before the injury?
24. Number of years working preburn?
25. Educational level achieved
  - (a) 6th grade or less
  - (b) 7th through 11th grades
  - (c) High school completion
  - (d) Some college
  - (e) College completion
  - (f) Graduate school
  - (g) Trade school
26. Number of years married in current marriage?
27. Number of times married
28. Reasons for terminating marriages
  - (a) Widowed
  - (b) Divorced
  - (c) Other \_\_\_\_\_

Core Questions - Burn Victim

1. Describe how the injury occurred.
2. How much do you blame self/others for the accident?
3. Please describe a typical day since you have been burned.
4. What effect has the injury had in your relationships with spouse/children/friends?
5. What kinds of activities do you do outside of the house?
6. How do you feel about your present daily routine?
7. If problems associated with the injury emerge as the subject answers questions 3, 4, and 5, the researcher will restate the problem and ask the subject what he or she does when the problems occurs.

APPENDIX C  
CORE QUESTIONS FOR THE CAREGIVER

A. Identifying information

1. Patient's medical record number
2. Date(s) of interview(s)
3. Age
4. Sex
  - (a) Male
  - (b) Female
5. Relationship to burn victim
6. Does subject reside with the patient
  - (a) yes
  - (b) no
7. If no, approximately how many times per week does subject see the patient?

B. Core Questions - Caregiver

1. Describe how the injury occurred.
2. How much do you think the patient blames himself/herself/others for the accident?
3. Please describe the patient's typical day since the injury.
4. What effect do you think that the injury has had on the patient's relationships with his or her spouse/children/friends?
5. What kinds of activities does the patient engage in outside of the house?
6. How do you think the patient feels about his present daily routine?
7. If problems associated with the injury emerge as the caregiver answers questions 3, 4, and 5, the researcher will restate the problem and ask the caregiver what the patient does when the problem occurs.

APPENDIX D  
MEDICAL INFORMATION

## I. Medical Information

1. Date of burn
2. Etiology of burn by victim type
  - (a) Innocent bystander
  - (b) Intended victim
  - (c) Victim of own actions - specify \_\_\_\_\_
  - (d) Extinguishing burning victim
  - (e) Military
  - (f) Industrial accident
  - (g) Accident due to previous medical problem - specify \_\_\_\_\_
3. Total percentage of body burns
4. Percentage of full thickness burn
5. Location of burn
  - (a) Face
  - (b) Neck
  - (c) Chest and abdomen
  - (d) Back
  - (e) Buttocks
  - (f) Arms
  - (g) Hands
  - (h) Legs
  - (i) Feet
  - (j) Perineum

## Hospital Experience

6. Date of admission to Burn Unit
7. Date of first discharge
8. Number of days for first admission
9. Was any psychiatric evaluation done?
  - (a) Yes
  - (b) No
10. If yes, list the conclusions based on the psychiatric assessment

## Post-Hospital Experience

11. Number of clinic visits to date.
12. Total number of surgical reconstructions

Preburn Experience with Alcohol and Drugs

13. What type of substances were used before the injury?
  - (a) Did not drink
  - (b) Consumed alcohol
  - (c) Used other than over-the-counter drugs
  - (d) Did not use drugs other than over-the-counter drugs
14. How many ounces of alcohol were consumed per day?
15. How many times a week was alcohol used?
16. If used other than over-the-counter drugs, what were they?
17. How often were other than over-the-counter drugs used?
18. Was patient intoxicated at the time of the injury?
  - (a) Yes
  - (b) No

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#### BIOGRAPHICAL SKETCH

Elizabeth Ann Shenkman was born on July 29, 1957 in Buffalo, New York. In 1975, she graduated from Largo Senior High School in Largo, Florida. Elizabeth graduated with honors from the University of Florida in 1979 with a Bachelor of Science in nursing. She worked at Shands Hospital, Burn Intensive Care Unit, for two years. In 1981, she began graduate study in psychiatric mental health nursing and graduated from the University of Florida with a master of science in nursing in December, 1982. Elizabeth began working toward her doctoral degree in January, 1983. During that time she was an assistant professor at the University of Florida, College of Nursing Adult Critical Care Program. In 1987, Elizabeth became the supervisor of a surgical oncology and orthopaedic unit at Shands Hospital. She also remained an adjunct assistant professor at the University of Florida College of Nursing. Elizabeth is married with one child. She received a Ph.D. in foundations of education in December, 1987.


I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

  
Gordon Greenwood, Chairman  
Professor of Foundations of Education


I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

  
John Newell  
Professor of Foundations of Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

  
Rodman Webb  
Professor of Foundations of Education

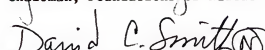
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This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December 1987

  
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